

DRAFT

SMITHSONIAN INSTITUTION

FIVE-YEAR PROSPECTUS
FY 1988 - FY 1992



OCTOBER 8, 1986

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SMITHSONIAN INSTITUTION
FIVE-YEAR PROSPECTUS
FY 1988 - 1992
INTRODUCTION

James Smithson bequeathed the whole of his property "to the United States of America, to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." In so doing, he created a charitable trust, through the terms of which the United States would serve as trustee for purposes directed toward the benefit of all mankind. By the Act of July 1, 1836, Congress accepted Smithson's bequest, and pledged the "faith of the United States" to carry out its purposes. In the Act of August 10, 1846, Congress established the Institution in its present form and placed responsibility for management with a Board of Regents.

The Smithsonian is a unique establishment which is both publicly supported and privately endowed, and whose management is vested in an independent board composed of federal officials, Members of Congress, and private citizens. This arrangement has made possible the remarkable growth and achievements of the Institution during the one hundred forty years of its existence. Donations from both the public and private sector have increased its collections and continuing additions to its trust funds have expanded and nourished the Institution's usefulness. Appropriations recommended by successive Administrations and approved by successive Congresses have provided steadily increasing federal support for many of the Smithsonian's far-reaching services to the public. Through the development of the Smithsonian Associates programs, the Institution now has a nationwide group of interested supporters who sponsor many of its educational activities across the country. Annually thousands of service hours are provided to the Institution by dedicated volunteers.

The Smithsonian Institution's programs are devoted to public education, research, and service in the arts, sciences, and history. Centered on the Mall in Washington, D.C., the Institution also operates major facilities and activities elsewhere in Washington, across the country, and overseas. It is one of the world's leading research centers and encompasses the world's largest museum complex. Smithsonian collections contain more than 100,000,000 art objects, natural history specimens, and artifacts. The collections are displayed for the enjoyment and education of visitors and are utilized for research by staff of the Institution and by hundreds of visiting students, scientists, and historians each year. The research, management, care, exhibition, and security of its collections and a program of selective acquisition for the collections are basic institutional commitments; the natural areas for which the Institution holds a trust responsibility serve as important assets for future generations.

In addition to museum curation and exhibition, the Smithsonian conducts a wide range of other programs in order to carry out its broad goal of increasing and diffusing knowledge about Man, his culture, and his environment. Some of these are joint ventures in cooperation with other institutions, universities, and government agencies in the United States and on

virtually every continent. It manages a research station and nature preserve in Panama for the international scientific community; it conducts basic research on the propagation of endangered species; and it delves into the complexities of the universe through its astrophysical research programs. As an outgrowth of institutional research, fundamental data are assembled for use by planners and research workers in other organizations, both government and private, and national and international in scope. Historical research, which enhances knowledge of this nation's growth through studies of technological development, art, and folklife and folklore traditions, is also a major endeavor.

The results of the Institution's research are disseminated to a wide audience through books, monographs, articles in professional journals, exhibit catalogues, and education pamphlets. Public-oriented programs other than exhibits include performances, radio, television, films, Smithsonian Magazine, Air and Space Magazine, and other publications. In addition to the approximately 26,000,000 visitors annually to the Institution's museums, galleries, and zoological park, many millions more view Smithsonian traveling exhibitions, which appear throughout the United States and abroad, and the Institution's annual folklife festival.

In the fall of 1977, the Regents and the Secretary established a five-year forward planning process covering all activities of the Institution. This process has proven to be a useful mechanism for management to examine development alternatives and to communicate important results and information to the Office of Management and Budget, Congressional authorizing and appropriations committees, and to other interested constituents. The Five-Year Prospectus, FY 1988-FY 1992 is the ninth in a series of documents resulting from that action. The Prospectus should be read in conjunction with another publication, the Smithsonian Institution's Programs and Activities (January 1984), which provides background information on the programs of each of the Institution's operating activities.

The content of the Prospectus is arranged by the major organization grouping of the Institution and corresponds to the assembly of the FY 1988 budget presented to Congress; i.e., Research, Museums, Public Service, and International Activities, with separate sections treating Special Programs, Associate Programs, Business Management Activities, and Administrative and Facilities plans. Detailed projections and brief descriptions for the bureaus and offices appear in Appendix I. Several items discussed in the text, along with the financial figures for FY 1988, complement the Institution's budget submission to the Office of Management and Budget, and also appear in that document.

Public Law 99-177, the Balanced Budget and Emergency Deficit Control legislation, in FY 1986 required the Institution to absorb a 4.3% reduction in base appropriation levels, and the Institution developed a spending plan to accomplish the reduction. Levels and effects of further cutbacks in FY 1987 are unknown at the moment. In making any necessary budgetary reductions, the Institution will seek to minimize the impact on the public while meeting its central responsibilities to conduct research and to maintain the national collections in art, history and science, held in trust for the American people. The cutbacks, if continued in FY 1987 and future

years, however, will inevitably affect all facets of the Smithsonian's federal operations. For FY 1987 the steps that may be taken to meet further reduction include hiring freezes, curtailment of equipment and other purchases for research and collections management, possible postponement or cancellation of a number of planned exhibitions, cancellation of a number of free public programs, cutbacks in training, grant and support programs, and possible furlough of employees. Also given the potential budgetary restrictions in future years extended summer hours will not be possible, as was the case in FY 1986. Reductions will be made with due attention to the priority of important institutional commitments that must be met. Such projects include some level of continued equipping of the Museum Support Center in Suitland, Maryland, to house and conserve the national collections and the operating programs of the Quadrangle, which will house the National Museum of African Art, the Sackler Gallery and important education programs.

Looking ahead to FY 1988 and beyond when potential reductions to the Institution's federal operating and other accounts could amount to several times those experienced in FY 1986, efforts may be undertaken to identify and examine options for more significant savings, including extensive program and support curtailments. Since the Institution's work is people intensive, with some 65 percent of its operating budget allocated to salaries and benefits, there is the inevitable prospect of substantial reductions to staff.

Because FY 1987 potential budget reductions are not incorporated into overall projections or the organization figures contained in Appendix I, increases being sought in FY 1988 build on the FY 1987 appropriation request before Congress and follow the FY 1988 budget submission to OMB. Also, for this Prospectus:

- Federal operational projections for the period FY 1989-92 assume enough additional funding to accommodate the effects of inflation and legislated and necessary pay increases, along with about 2% or 3% additional annual funding for selected programs to allow the Institution to maintain some momentum in support of high priority activities.
- Renovation, restoration, and construction projections assume continued support emerging to maintain and refurbish, in a safe and effective manner for public and staff use, the physical facilities of the Institution. Construction projections assume continued support for some major capital expansion projects that the Institution requires to accommodate, display and protect the collections and cultivate associated research and education activities.
- The text (Chapters and Appendix I) reflects these projections, and highlights and describes the various projects to be achieved within the limited growth portrayed.

The Prospectus reflects needs and opportunities that the Smithsonian has described before. It emphasizes selected aspects of the Institution's work while assuring that others will continue at approximately the present level of activity. Areas of emphasis include research and replacement of

research equipment, security of collections and other property, automation of records and systems, and the maintenance of current facilities. Also, activities in celebration of the Bicentennial of the Constitution and the Columbian Quincentennial are incorporated for future years. The Museum Support Center at Suitland continues to need appropriate operating and equipment purchase resources for the activities to be housed there. The Institution will partially support and develop with federal appropriations a project directed at improving the quality of science education in the nation's elementary and secondary schools through development of concepts and materials for better teaching. This is a joint project involving the Smithsonian and the National Academy of Sciences. Renewed emphasis is being placed on various aspects of research, especially tropical biology and forest ecology, systematics, equipment and instrumentation. Facilities development plans beyond the successful establishment of the Quadrangle include additional work at the Zoological Park at Rock Creek and continued development of the conservation and research center at Front Royal, progress with regard to selected science facilities, some new and expanded facilities for the Cooper-Hewitt Museum, storage and exhibit facilities for the Air and Space Museum, design and planning for the renovation of the General Post Office Building, and a new Administrative Service Center.

Through its trust operations, the Institution will continue to concentrate on ways to develop quality educational products for the visiting public and Associate programs, sustain growth in endowment reserves and supplement important programs such as collections acquisitions, special exhibitions, fellowships, selected research investigations, conferences, and symposia of timely importance. Trust funds, gifts, fund raising programs, and other arrangements are projected to help defray costs associated with selected plant or facility projects such as public restaurants, museum shops, and research and exhibition areas.

Although present trust revenues are encouraging, the Institution's management feels only guardedly optimistic about any five-year projection of such income. Further reduction to federal resources, if severe enough, could also affect trust income levels, and the level of public accessibility to the Institution's products or services such as those performed by the National and Resident Associates.

Within the framework of financial and budgetary uncertainties, the Institution plans to pursue the following general objectives over the next five years.

<u>Objectives</u>	<u>Principal Funding Source(s)</u>
<u>Operations</u>	
1. Maintain the level of technical assistance, equipment, and program funds which support collections-related and other original research by the Institution's professional staff. Priority is placed on stimulating innovative approaches	Federal appropriations and nonappropriated unrestricted trust funds

for collaborative research with other countries and organizations, and on improving research through competition, outside peer evaluation, and fellowship programs for senior and aspiring junior scholars.

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| 2. Enhance the Institution's activities in national and international cultural, biological, and physical science research, and in humanities and arts scholarship. Emphasis will be placed on improving noncollection-based research studies through new instrumentation techniques and technology. | Federal appropriations |
| 3. Open and operate the Quadrangle; establish international exhibit, research, collections, and education programs. | Federal appropriations, nonappropriated unrestricted trust funds, and private donations |
| 4. Complete the first phase of equipping the Museum Support Center, and establish as an integral part of operations a collection conservation and conservation training program. | Federal appropriations and nonappropriated unrestricted trust funds |
| 5. Strengthen museum operations in the documentation and care of the collections; in development of new analytical programs, and automated security and information retrieval systems; and in conservation programs. Increased attention in various operations will be given to safety programs affecting visitors, employees, the collections, and facilities. | Federal appropriations |
| 6. Continue to produce exhibitions using contemporary techniques to communicate to the Institution's audiences information about recent discoveries, new technologies, and new results of scholarship in science, history and art. | Federal appropriations and nonappropriated unrestricted trust funds |
| 7. Continue to offer the nation outstanding magazines and other quality publications; utilize the latest technologies and methods to provide radio programs, recordings, and television and film presentations. | Nonappropriated unrestricted trust funds |

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| 8. Strengthen the National Collections for research and exhibitions through the acquisition of important objects and specimens. | Federal appropriations, nonappropriated unrestricted trust funds, and private donations |
| 9. Maintain administrative, financial, and other support services to meet current and anticipated program needs. Areas of special emphasis include safety, personnel, facilities and financial management systems to meet the total requirements of the Institution, and computer and automation services for improved documentation and control of the collections. Strengthening of equal employment opportunities, and activities aimed at attracting and involving a more racially and culturally diverse audience will continue to receive attention over the planning period. | Federal appropriations and nonappropriated unrestricted trust funds |

Facilities

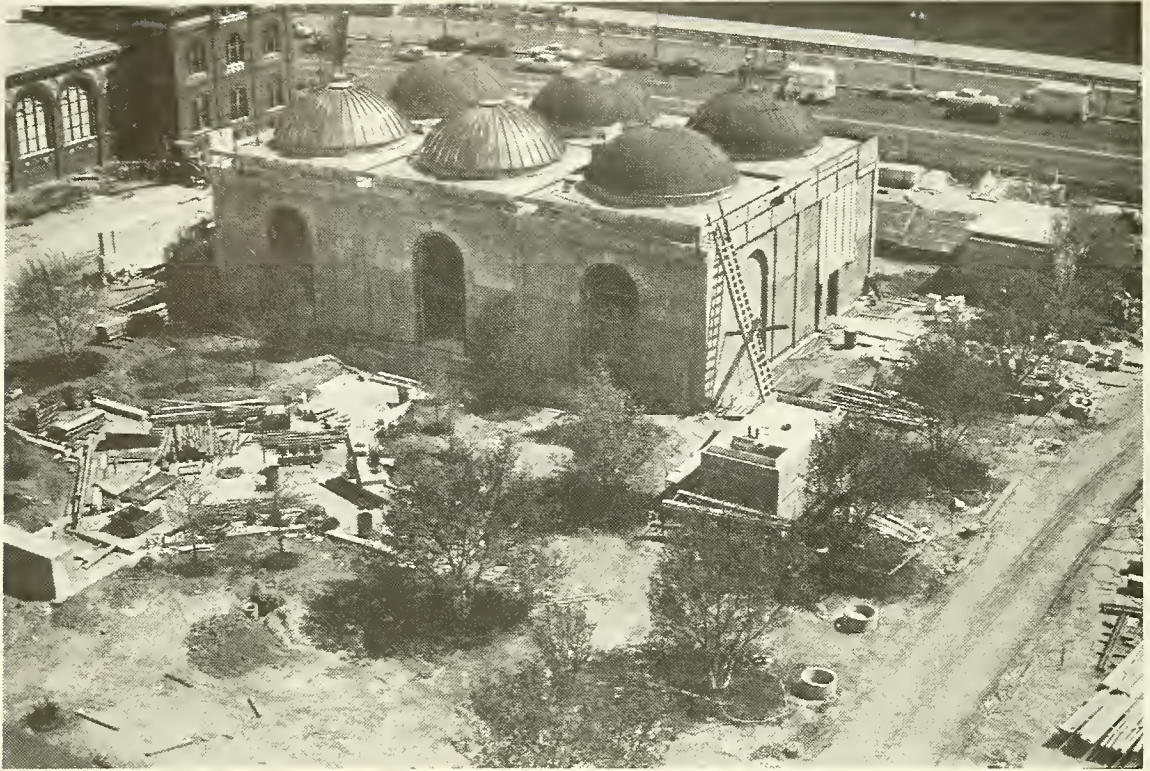
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|--|---|
| 1. Open and equip the Quadrangle to accommodate the activities of the Arthur M. Sackler Gallery, the National Museum of African Art, and the International Center. | Federal appropriations, nonappropriated unrestricted funds, and private donations |
| 2. Keep Smithsonian buildings in safe and functional condition with special emphasis on the provision of fire detection, containment, and suppression systems; access by handicapped persons; building exteriors, and energy conservation. | Federal appropriations |
| 3. Continue internal planning for new and renovated facilities at the Smithsonian's Washington, D.C. and field locations for purposes of facilitating research and educational programs. Special facilities projects include those for the Tropical Research Institute in Panama; the Fred L. Whipple Observatory in Arizona; the Cooper-Hewitt Museum in New York; the Air and Space Museum at Washington/Dulles International Airport; design plans for the General Post Office Building; and a new Administrative Service Center. | Federal appropriations, private donations, and other fund raising efforts |

4. Continue phased development and planning of animal and public facilities at the Zoological Park in Rock Creek Valley, and improving the research, conservation, and visitor education facilities at the Zoo's Conservation and Research Center at Front Royal, Virginia. Federal appropriations

While putting the programs of the Quadrangle on a firm operational base over the next few years is the highest priority of the Institution, within the general objectives outlined above the Institution will be working toward solving a few specific problems, and establishing a few new patterns of activity and associated resources. Briefly summarized, chief among these are:

- . Emphasizing within resources available special lines of investigation in some scholarly programs involving examination of global biodiversity, reemphasis on the conduct of systematics, and modernization of equipment and instrumentation, including fabrication of new astronomical instruments.
- . Strengthening ties with other academic and museum enterprises, domestic and foreign, in research and other activities of common interest.
- . Strengthening our buildings renovation and restoration activities, and programs affecting public and staff safety, access, and use of the buildings, with emphasis on the identification and correction of potentially hazardous conditions including the handling and removal of materials.
- . Incorporating the latest technologies and methodologies in collections management, conservation, and preservation programs.
- . Making our overall exhibition programs more effective in terms of content and more efficient in the use of resources.
- . Increasing the diversity of various adult and juvenile audiences through better exhibitions, publications, and other educational and public service activities.
- . Increasing future revenues for program support through more diverse and aggressive fund raising, auxiliary, and business management activities.
- . Developing and implementing accounting, payroll, and other financial planning and management information systems for improved application and control of available resources.

For the most part, the effects of inflation cannot be incorporated realistically into the Institution's resource forecasts for bureau and program operations. Summary Table 1, however, attempts to show the general levels of resources that would materialize assuming legislated pay changes are forthcoming in the range of three percent per year, federal nonpersonnel



Quadrangle construction nears completion. Upper photo shows African pavilion copper roofing and skylight, with fountain construction in the foreground. Lower photo shows granite installation on Sackler pavilion north facade and completion of copper roofing. Photo by Frank Gilmore.

resources are appropriated based on price changes for future years as derived from indices supplied by the Office of Management and Budget, and that federal program growth in the range of 2% to 3% is allowed. Similar patterns are incorporated for trust projections. By FY 1992, resources from all sources required for various operations would increase from FY 1986 levels of approximately \$356,000,000 to about \$537,000,000.

Exclusive of legislated pay increases, federal operating costs are projected to increase approximately \$71,000,000. Significant additions are forecast for such items as basic and interpretive research utilizing the collections and scientific and cultural information, improvements to automated collections and management systems, improvements to technical and program support, physical plant operations, maintenance and repair, safety programs, security, and instrumentation and equipment replacement.

Operations supported with nonappropriated trust funds and federal grants and contracts are expected to increase by approximately \$81,000,000. These increases involve primarily the revenue producing activities, including the Magazine, the Smithsonian Press, Museum Shops and Mail Order Division, and the National Associates program. Detailed forecasting of federal grant and contract activities is difficult to achieve, but the Institution expects continued support for various operations in future years. Finally, operations funded by restricted trust fund resources are expected to remain approximately stable, largely reflecting a conservative outlook for gift and grant support in future years. This forecast may change over the fiscal year.

The trust fund forecasts assume the Institution will make measured progress in increasing its capital reserves (endowments), thus approximately \$3,000,000 to \$5,000,000 a year are incorporated into the projections for this purpose. In addition, trust support for fellowships, special exhibitions, collection acquisitions, research, and other educational activities is projected to increase in future years if economic conditions permit, and if the Institution's auxiliary and revenue-producing activities continue to perform in a satisfactory fashion.

Notes on Financial Projections

The tables are designed to show trends in the Institution's future year resources patterns, and to reflect the changes and growth contained in the narrative portions of this report. The FY 1986 figures are end-of-year estimates for expenditures and income. FY 1987 figures are those pending approval by Congress, incorporating the Board of Regents' authorization to expend the FY 1987 appropriation, and the Board of Regents' approval of the nonappropriated trust fund portion of the FY 1987 budget.

The FY 1988 figures reflect the consolidated budget assembled for approval by the Board of Regents at its September 15, 1986 meeting. The estimates have been submitted to the Office of Management and Budget. The FY 1988 figures resulted from the Institution's planning and budget reviews that took place during the spring and summer months of 1986, and included deliberations with the directors of bureaus and offices. Projects for years FY 1989-1992 were derived from basic materials prepared by the organizations



Center for Asian Art designers and Director Thomas Lawton discuss the Sackler bronzes which will be included in the opening exhibition of the Sackler Gallery. The cardboard horse represents a large ceramic sculpture that will be used in the Sackler entrance pavilion. Photo by Kim Nielsen.

and bureaus of the Institution and then reviewed by the appropriate members of the Secretary's Management Committee.

Trust fund projections, as mentioned earlier, are vulnerable to fluctuations in the nation's economic climate. They are presented to help explain the expected use of these funds. Trust funds are composed of restricted and unrestricted funds. Unrestricted trust funds (general and special purpose) originate from a variety of sources including income from endowments and current fund investments; food service concessions; sales of Smithsonian products based on designs and objects in the collections; the Resident and National Associate Programs (including Smithsonian magazine); and a publication program. In addition, certain bureaus have their own income-producing activities. Restricted trust funds include gifts, grants, endowment, and other income designated for specific projects and purposes by the donor. The Freer fund, the largest example in this category, is strictly controlled under the terms of the original bequest for the sole use of the Gallery.

There are three major purposes to which the unrestricted trust funds are applied. First, the operating expenses of the Associate Programs and revenue-producing activities, such as magazines and the museum shops, are totally funded from the earned income of these activities. Second, central management and administrative service units of the Institution, such as legal counsel, accounting, personnel, supply, and others, receive trust fund allotments funded largely from the overhead recovery on grants and contracts administered by the Smithsonian and from administrative fees charged to trust-funded activities. General operating funds are also provided to various units for research and other specific purposes. Third, a variety of allocations for important institutional and bureau needs are made with the approval of the Board of Regents, such as the Collections Acquisitions, Scholarly Studies, and Education programs, and the Institution's fellowship programs.

After the three major categories of operating expense financed with unrestricted trust funds are met, the remaining unrestricted income is designated for three purposes. Funds are transferred to the museums and galleries in recognition of their assistance in the planning and conduct of museum shop, product development, and concession programs. These funds are used for the general operations of the recipient bureaus. A second designation is for improvements to the physical plant or land acquisitions. Finally, funds permitting, the Institution makes an annual transfer to its endowment for the purpose of providing income for rising costs in future years.

The other source of nonappropriated funding, federal grants and contracts, is made available to the Smithsonian by governmental agencies and departments to support specific types of research, educational, or other projects which the Smithsonian can undertake as a result of its expertise or its ability to respond quickly to certain kinds of needs.

Tables 1 and 2. Table 1 contains general levels of dollar resources (or revenues) from various sources which the Institution projects will be necessary for the conduct of its operations. In a summary fashion, it incorporates estimates for inflation and pay increases associated with

federal and trust operations of the Institution. Table 2 projects expenses by areas of operation (Research, Museums, Public Service, etc.) along with the application of trust funds to such items as plant improvements; endowments; and special activities such as the Collection Acquisition, Scholarly Studies, and Education Programs.

Table 3, 3A and 4. Major construction projects are included where completion or some progress are projected. For some future projects, detailed planning and estimating remain to be done and the amounts as well as the possible sources of funding have not been fully determined.

Table 5. Projects associated with programs and operating activities of units being located in the Quadrangle, along with some expected maintenance and support costs, are consolidated in Table 5 to provide an overview of the organizational resources involved in that new facility.

Appendix I, Tables 6 through 14. These contain detailed expense projections for the Institution's museums, galleries, laboratories and other programs. For ease of presentation, expenses associated with the various administrative, financial, and support organizations of the Institution are grouped into three categories in Table 13: (1) Central Management Offices, (2) Specialized Administrative and Technical Offices, and (3) Facilities Offices.

SMITHSONIAN INSTITUTION
SOURCE OF OPERATING FUNDS
FY 1988 PROJECTED THROUGH FY 1992

[\$000]

Table 1

SOURCE OF OPERATING FUNDS	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992
Federal Salaries and Expenses	169,384	190,061	200,972	217,537	224,845	232,058	240,203
Plus cumulative effect of legislated pay changes	—	3,700	7,800	12,400	17,100	21,800	26,600
Subtotal	169,384	193,761	208,772	229,937	241,945	253,858	266,803
Noneappropriated Trust Funds							
Unrestricted General							
Investments	4,500	5,095	4,500	4,525	4,550	4,575	4,600
Gifts	50	50	50	50	50	50	50
Auxiliary Activities	145,295	158,460	170,865	183,125	195,510	207,960	221,855
Miscellaneous	210	80	110	50	50	50	50
Subtotal	150,055	163,685	175,525	187,750	200,160	212,635	225,555
Unrestricted Special Purposes							
Investments	789	793	834	855	855	855	855
Gifts	472	201	211	225	225	225	225
Bureau Activities	5,752	7,365	7,475	7,900	8,200	8,600	9,000
Miscellaneous	1,815	1,934	1,899	1,920	1,920	1,920	1,920
Subtotal	8,828	10,293	10,419	10,900	11,200	11,600	12,000
Restricted							
Investments	4,001	4,536	4,726	4,764	4,838	4,965	5,100
Gifts, Grants and Contracts	5,793	11,004	11,564	6,811	6,922	7,000	7,100
Miscellaneous	2,799	2,128	1,964	2,000	2,000	2,000	2,000
Subtotal	12,593	17,666	18,254	13,575	13,760	13,965	14,200
Federal Grants and Contracts	16,921	18,933	25,835	24,724	25,819	19,075	17,083
Gross Income	357,781	404,338	438,805	466,886	492,884	511,133	536,641
Less Expenses of Auxiliary and Bureau Activities	(130,087)	(142,677)	(152,057)	(164,452)	(175,463)	(186,353)	(196,275)
Net Funds Provided	227,694	261,661	286,748	302,434	317,421	324,780	338,366

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1988 PROJECTED THROUGH FY 1992

(\$000)

Table 2 (1)

APPLICATION OF OPERATING FUNDS	FY 1988	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992
Research							
.Federal Salaries and Expenses	31,966	34,962	36,413	38,897	40,205	41,901	43,515
.Unrestricted General							
-Program and Administrative*	974	1,213	1,154	1,200	1,107	1,149	1,190
-Auxiliary Activities	—	—	—	—	—	—	—
.Unrestricted Special Purpose							
-Bureau Activities	442	341	337	353	363	373	388
-All Other	1,055	1,068	982	1,021	1,061	1,101	1,146
.Restricted	1,341	2,215	1,872	2,164	2,264	2,285	2,300
.Federal Grants and Contracts	15,076	16,500	23,258	22,588	23,640	18,837	14,784
Subtotal	50,854	56,297	63,818	66,223	68,640	63,646	63,323
Museums							
.Federal Salaries and Expenses	64,362	71,473	74,031	77,805	78,805	78,835	79,115
.Unrestricted General							
-Program and Administrative	7,114	2,155	1,903	1,968	2,041	2,112	2,188
-Auxiliary Activities	1,800	—	—	—	—	—	—
.Unrestricted Special Purpose							
-Bureau Activities	2,188	4,416	4,646	4,948	5,124	5,492	5,760
-All Other	4,722	4,307	3,085	3,380	3,451	3,525	3,601
.Restricted	9,435	10,934	10,370	8,624	8,347	8,545	8,731
.Federal Grants and Contracts	1,500	1,384	1,379	1,465	1,488	1,528	1,566
Subtotal	91,119	94,649	95,414	98,190	99,256	100,035	100,961
Public Service							
.Federal Salaries and Expenses	2,224	2,438	2,407	2,407	2,407	2,407	2,407
.Unrestricted General							
-Program and Administrative	1,841	2,216	2,115	2,211	2,313	2,418	2,528
-Auxiliary Activities	13,420	13,390	14,580	15,880	16,920	17,670	18,860
.Unrestricted Special Purpose							
-Bureau Activities	36	72	83	100	112	125	139
-All Other	184	3	1	1	1	1	1
.Restricted	12	—	—	—	—	—	—
.Federal Grants and Contracts	—	—	—	—	—	—	—
Subtotal	17,717	18,119	19,186	20,599	21,753	22,621	23,935

* Net of SAO Overhead Recovery

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 PROJECTED THROUGH FY 1992

(\$000)

Table 2 (2)

APPLICATION OF OPERATING FUNDS	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992
Directorate, International Activities							
.Federal Salaries and Expenses	507	1,027	888	1,088	2,088	2,088	2,088
.Unrestricted General							
-Program and Administrative	594	789	742	713	644	666	690
-Auxiliary Activities	—	—	—	—	—	—	—
.Unrestricted Special Purposes							
-Bureau Activities	—	—	—	—	—	—	—
-All Other	100	150	175	175	190	220	220
.Restricted	288	251	369	454	500	500	500
.Federal Grants and Contracts	—	—	—	—	—	—	—
Subtotal	1,489	2,217	2,174	2,430	3,422	3,474	3,498
Special Programs							
.Federal Salaries and Expenses	8,130	9,826	10,108	12,392	9,412	7,758	6,757
.Unrestricted General							
-Program and Administrative	1,028	1,089	1,137	1,179	1,223	1,253	1,315
-Auxiliary Activities	—	—	—	—	—	—	—
.Unrestricted Special Purposes							
-Bureau Activities	85	7	7	10	9	10	10
-All Other	8,244	8,572	9,924	10,538	11,488	12,868	13,643
.Restricted	671	506	594	783	782	813	850
.Federal Grants and Contracts	345	1,069	1,198	670	690	711	732
Subtotal	18,481	21,069	22,968	25,572	23,604	23,413	23,307
Associates Programs							
.Federal Salaries and Expenses	—	—	—	—	—	—	—
.Unrestricted General							
-Program and Administrative	992	1,008	947	987	1,017	1,048	1,080
-Auxiliary Activities	77,120	85,810	91,350	97,800	105,200	112,465	120,120
.Unrestricted Special Purposes							
-Bureau Activities	11	13	13	—	—	—	—
-All Other	238	368	226	222	118	66	67
.Restricted	92	68	23	—	—	—	—
.Federal Grants and Contracts	—	—	—	—	—	—	—
Subtotal	78,453	87,267	92,559	99,009	106,335	113,579	121,257

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 PROJECTED THROUGH FY 1992

(\$000)

Table 2 (3)

APPLICATION OF OPERATING FUNDS	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992
Business Management							
.Federal Salaries and Expenses	—	—	—	—	—	—	—
.Unrestricted General							
-Program and Administrative	—	—	—	—	—	—	—
-Auxiliary Activities	33,915	37,330	39,775	44,030	46,320	48,720	51,410
.Unrestricted Special Purpose							
-Bureau Activities	—	—	—	—	—	—	—
-All Other	—	217	228	307	322	338	355
.Restricted	—	—	—	—	—	—	—
.Federal Grants and Contracts	—	—	—	—	—	—	—
Subtotal	33,915	37,547	40,003	44,337	46,642	49,058	51,765
Administrative, Financial and Technical Services							
.Federal Salaries and Expenses	12,620	13,870	15,187	16,075	16,278	16,373	16,464
.Unrestricted General							
-Program and Administrative*	(453)	2,315	2,506	2,168	2,367	2,554	2,771
-Auxiliary Activities	—	—	—	—	—	—	—
.Unrestricted Special Purpose							
-Bureau Activities	1,053	1,258	1,222	1,271	1,349	1,429	1,514
-All Other	1,708	1,081	424	125	314	14	14
.Restricted	116	153	99	117	117	117	117
.Federal Grants and Contracts	—	—	—	—	—	—	—
Subtotal	15,044	18,477	19,438	19,754	20,425	20,487	20,880
Facilities Services							
.Federal Salaries and Expenses	49,575	57,038	58,878	61,605	63,982	66,528	68,889
.Unrestricted General							
-Program and Administrative	2,033	1,919	2,011	2,111	2,208	2,310	2,418
-Auxiliary Activities	—	—	—	—	—	—	—
.Unrestricted Special Purpose							
-Bureau Activities	39	40	44	60	66	69	74
-All Other	71	187	195	214	214	214	214
.Restricted	7	7	7	7	7	7	8
.Federal Grants and Contracts	—	—	—	1	1	1	1
Subtotal	51,725	59,191	61,133	63,998	66,478	69,129	71,604

* Net of SI Overhead Recovery

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1988 PROJECTED THROUGH FY 1992

(\$000)

Table 2 (4)

APPLICATION OF OPERATING FUNDS	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992
Adjustments for Inflation, Pay Requirements and Grade Reductions							
Federal Salaries and Expenses							
-Necessary Pay	—	—	2,508	4,600	7,200	10,300	13,400
-Grade Reductions	—	(373)	(748)	(932)	(932)	(932)	(932)
-Inflation	—	—	1,300	3,800	5,400	6,800	8,500
-Supplemental	—	3,700	7,800	12,400	17,100	21,800	26,600
Subtotal	—	3,327	10,882	19,668	28,788	37,968	47,568
Institutional Total							
Federal Salaries and Expenses	169,384	193,761	208,772	229,937	241,945	253,858	266,803
Unrestricted General							
-Program and Administrative	14,121	12,704	12,515	12,535	12,920	13,510	14,180
-Auxiliary Activities	126,255	136,530	145,705	157,710	168,440	178,855	190,390
Unrestricted Special Purpose							
-Bureau Activities	3,832	6,147	6,352	6,742	7,023	7,498	7,885
-All Other	16,322	15,951	15,240	15,983	17,159	18,347	19,261
Restricted	11,962	14,134	13,134	12,149	12,017	12,267	12,508
Federal Grants and Contracts	16,921	18,933	25,835	24,724	25,819	19,075	17,083
Gross Funds Applied	358,797	398,160	427,553	459,780	485,323	503,410	528,108
Less Expenses of Auxiliary and Bureau Activities	(130,087)	(142,677)	(152,057)	(164,452)	(175,463)	(186,353)	(198,275)
Net Funds Applied Before Transfers							
Federal Salaries and Expenses	169,384	193,761	208,772	229,937	241,945	253,858	266,803
Unrestricted General	14,121	12,704	12,515	12,535	12,920	13,510	14,180
Unrestricted Special Purpose	16,322	15,951	15,240	15,983	17,159	18,347	19,261
Restricted	11,962	14,134	13,134	12,149	12,017	12,267	12,508
Federal Grants and Contracts	16,921	18,933	25,835	24,724	25,819	19,075	17,083
Net Before Transfer	228,710	255,483	275,496	295,328	309,860	317,057	329,833

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 PROJECTED THROUGH FY 1992

(\$000)

Table 2 (5)

APPLICATION OF OPERATING FUNDS	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992
Transfers: Out/(In)							
.Federal Salaries and Expenses	—	—	—	—	—	—	—
.Current Funds Transfers (Internal)							
-Unrestricted General	10,304	10,251	11,705	12,105	13,400	14,600	15,915
-Unrestricted Special Purpose	(10,304)	(10,452)	(12,067)	(12,705)	(14,000)	(15,200)	(16,265)
-Restricted	—	201	362	600	600	600	350
.Current Funds to Plant Improvement							
-Unrestricted General	41	—	—	—	—	—	—
-Unrestricted Special Purpose	—	—	—	—	—	—	—
-Restricted	(8)	—	—	—	—	—	—
.Current Funds to Endowment							
-Unrestricted General	3,000	3,000	3,500	4,000	4,500	5,000	5,500
-Unrestricted Special Purpose	2,732	—	—	—	—	—	—
-Restricted	2,442	1,218	979	1,100	1,110	1,120	1,120
Total Transfers	8,207	4,218	4,479	5,100	5,610	6,120	6,620
Net Changes in Fund Balances: Increase (Decrease)							
.Unrestricted General	(3,666)	1,200	2,100	1,400	900	670	570
.Unrestricted Special Purpose	(3,754)	(1,353)	894	680	1,016	955	1,119
.Restricted	(1,803)	2,113	3,779	(274)	33	(22)	224
.Federal Grants and Contracts	—	—	—	—	—	—	—
Subtotal	(9,223)	1,960	6,773	2,006	1,951	1,603	1,913
Net Funds Applied							
.Federal Salaries and Expenses	169,364	193,781	206,772	229,937	241,945	253,656	266,603
.Unrestricted General	23,800	27,155	29,620	30,040	31,720	33,780	36,165
.Unrestricted Special Purpose	4,996	4,146	4,067	4,156	4,177	4,102	4,115
.Restricted	12,593	17,666	16,254	13,575	13,760	13,965	14,200
.Federal Grants and Contracts	16,921	16,933	25,835	24,724	25,619	19,075	17,063
Net Funds Applied	227,694	261,661	286,748	302,434	317,421	324,760	336,366

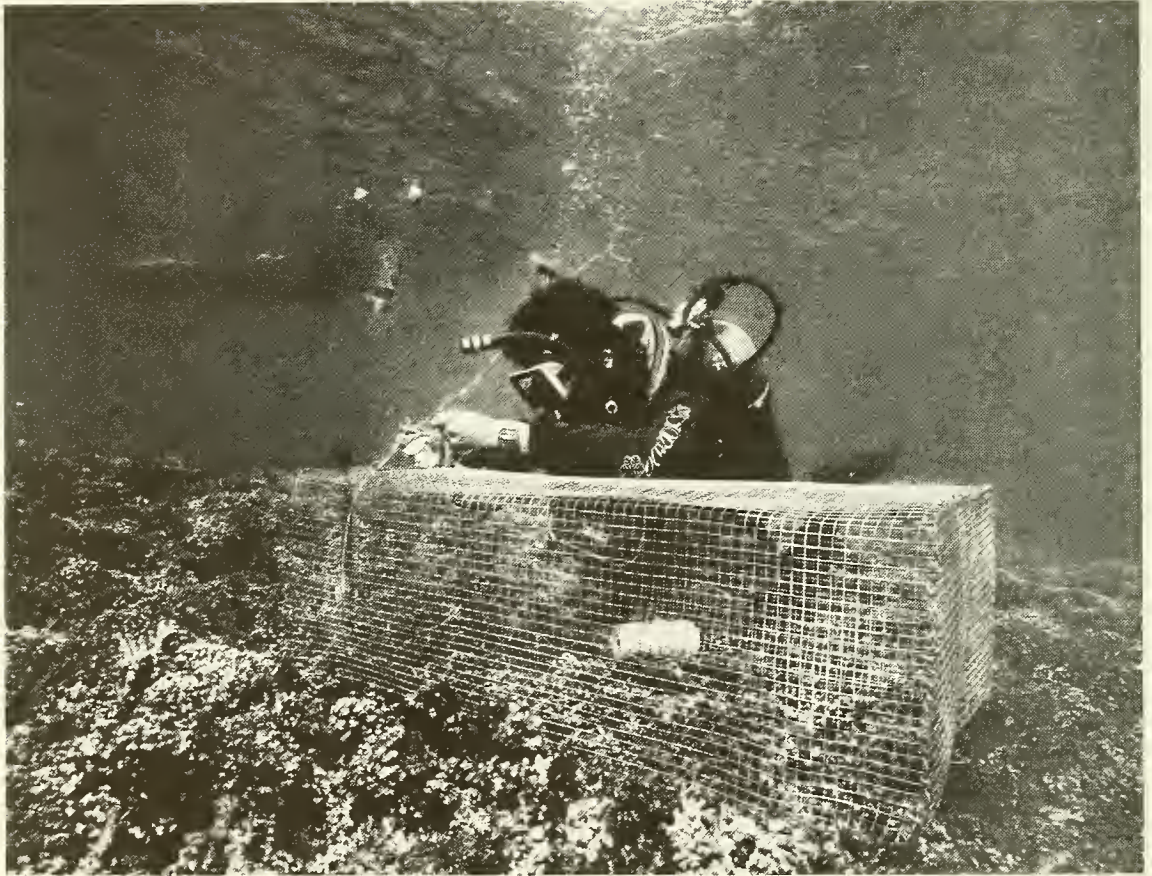
RESEARCH

The research programs of the Institution are carried out by its bureaus and museums. Research is the principal activity of the Astrophysical Observatory (SAO), Tropical Research Institute (STRI), and the Environmental Research Center (SERC) and is an important component in the Museum of Natural History (NMNH), Air and Space Museum (NASM), the Zoological Park (NZP), and the Museum of American History (NMAH), where exhibitions, and collections management also play important roles. The curators in Smithsonian art museums contribute considerable scholarly achievement in association with the curation of collections and preparation of exhibitions. In addition to being responsible for research at the Smithsonian Institution, the Office of the Assistant Secretary for Research has oversight over the International Environmental Science Program, the Office of Fellowships and Grants, Smithsonian Institution Libraries, Smithsonian Institution Archives, Joseph Henry Papers, and the Office of American Studies.

The Smithsonian, by virtue of its staff, collections, data bases, and research facilities, is a unique international resource in the basic sciences, arts and the humanities. Complementing industrial, federal, and university research, the Smithsonian's long-term research efforts provide critical continuity to the nation's research enterprise in a number of fields. The Institution's systematists, for example, provide the fundamental building blocks by which more advanced research in ecological/evolutionary sciences may occur. In addition to serving the broad research community, Smithsonian research is the foundation for the Institution's public activities. The accuracy and currency of its exhibitions and the quality of its public education programs depend directly on the research of the staff. Continued support for the Institution's research is required if other elements of the Smithsonian's overall program are to succeed.

Current and Projected Resources

Sources of research support vary markedly from organization to organization. For example, the Marine Station at Link Port, Fort Pierce, Florida, which is administered by the Museum of Natural History, operates solely with restricted trust funds, while the Astrophysical Observatory, because of its unique national and international position as a research leader, has about two-thirds of its dollar and personnel resources associated with federal grants and contracts. The Tropical Research Institute and the Zoological Park, on the other hand, rely extensively on federal appropriations for maintaining their science research programs. Such is the case with many other museums and galleries of the Institution, e.g. the Museum of Natural History, the Air and Space Museum, the Portrait Gallery, the American Art Museum, and the American History Museum, which conduct their basic exhibit, research, collections, and building services activities primarily with federal appropriations.



Researcher conducts studies of sea urchins predation in the Gulf of Chiriqui, Pacific coast of Panama, an area which was profoundly affected by the "El Nino" event in 1983.

A breakdown of FY 1986 and projected FY 1992 resources for units reporting to the Assistant Secretary for Research operations (before application of overhead recovery) follows:

<u>Source of Funds</u>	<u>FY 1986</u>		<u>Projected FY 1992</u>	
	<u>Full-time Employment</u>	<u>Funds (\$000s)</u>	<u>FTE</u>	<u>Funds (\$000s)</u>
Federal Salaries & Expenses	698	\$31,966	812	\$43,515
Unrestricted trust	71	4,994	65	6,109
Restricted trust	11	1,341	12	2,300
Federal Grants & Contracts	144	15,076	120	14,784
Total	924	\$53,377	1,009	\$66,708

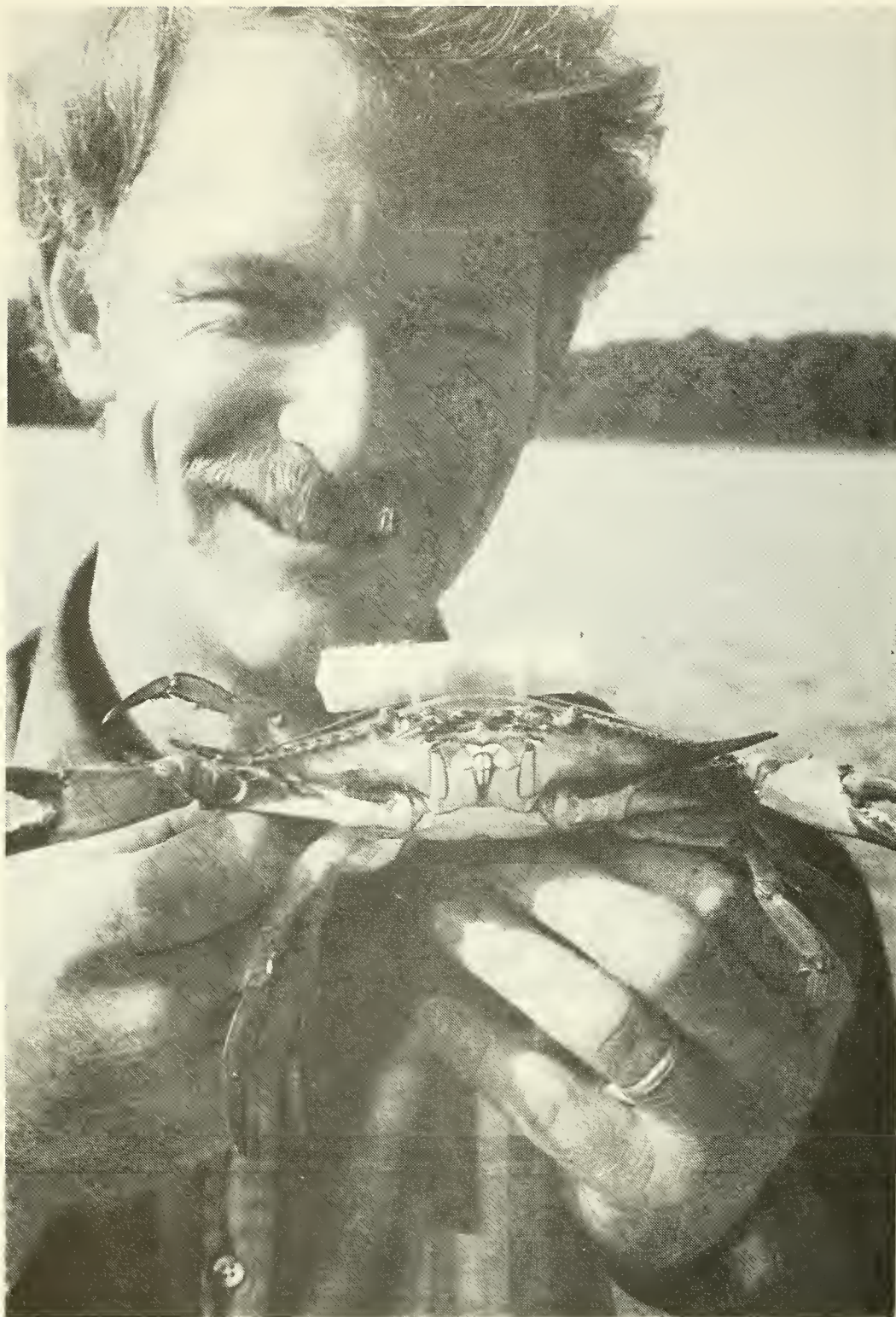
In FY 1986, total resources amounted to approximately \$53,000,000 and 924 full-time employees. Total funding consisted of approximately 57 percent federal appropriations, 27 percent federal grants and contracts, and 16 percent nonappropriated unrestricted and restricted trust funds.

Future Year Prospectus

Because of uncertainties surrounding the future year impact of Public Law 99-177 on the Institution's resource levels, projections of additional federal program increases for these research activities are modest; amounts will also be needed to cover uncontrollable expenses such as necessary pay and inflation.

The necessity to find solutions to emerging budget constraints is great; finding solutions to the many research challenges facing the world, as the Institution moves toward the year 2000, are even greater. Preventing the deterioration of our natural environment with its attendant loss of biological diversity, the search for new food and medicinal resources, and the quest to understand what lies beyond our own planet, are but a few examples. These issues serve as the backdrop for setting Smithsonian research goals in the sciences. The Institution's resources must be marshalled not only to engage in fundamental research in the aforementioned fields, but to inform the public through exhibitions and educational programs of the complexities of these issues. In the arts and humanities, research is aimed at elucidating the aesthetic aspects of objects, placing objects in a better context of long-term historical and social trends and bridging understanding between distinct cultures.

Within the last several years, considerable attention has been paid by policymakers to the accelerating pace of destruction of tropical forest ecosystems. These areas have been described as the "cradle of life," and serve an important role in preserving the global environmental balance and genetic diversity. New food resources, as well as elements for new medicinal products, are found in these fragile regions. Continued destruction of these areas results in more rapid extinction of species



A lightweight ultrasonic telemeter attached across the top shell of this Atlantic blue crab enables Dr. Anson Hines of the Smithsonian Environmental Research Center to track its movements after it is released into the Rhode River, a subestuary of the Chesapeake Bay. Photo by Jeff Ploskonka.

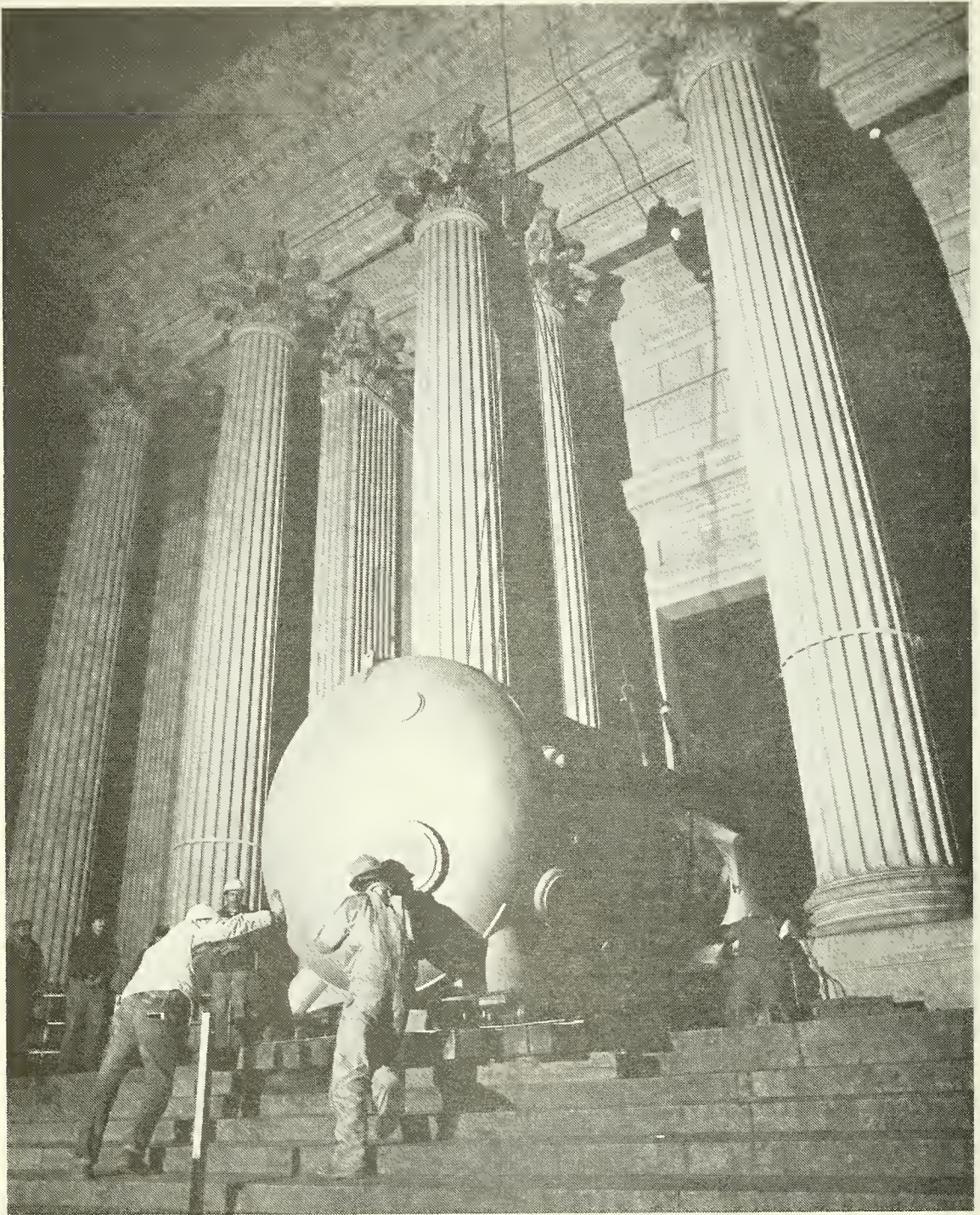
(most are yet undescribed) and may even threaten man's continuing existence. Understanding the workings of the tropics -- what planets and animals are there now, and how they evolved to fill the niches they occupy -- is critical. The Smithsonian, because of its collections, staff and field stations, is well suited to pursue extended research on these tropical problems. Scientists from the Museum of Natural History are seeking to initiate in FY 1987 a new multidisciplinary program entitled, "Biological Diversity in South America," through which they plan a comprehensive survey of Amazonian flora and fauna. This effort will have an important training component for both South and North American students. The Tropical Research Institute plans to continue its pioneering studies in tropical biology at the Barro Colorado Island Nature Monument and its two marine research stations in Panama. This bureau also has planned a new tropical forest research initiative in FY 1987 and is seeking to enhance its capabilities in soil ecology and biochemical evolution. The National Zoological Park is strengthening its activities in the tropics, especially in expanding its successful efforts in reintroducing zoo-bred primates to their original habitats in Brazil.

The Museum of Natural History continues to assess the feasibility of a National Biological Survey for temperate North America; systematic biologists throughout the country would participate and the project would take several years to complete. As a result of the Arctic Research and Policy Act of 1984, the Museum also intends to expand its Arctic research in archaeology and anthropology, traditional areas of museum competence which have begun to attract renewed national interest.

Research at the Environmental Research Center in Edgewater, Maryland, will be enhanced by the transfer of two projects from the Rockville, Maryland Laboratory, which is being closed in FY 1987. The first is a long-term study on the CO₂ balance in the oak-hickory forest; it will complement a similar long-term analysis of CO₂ levels in the tropical forest in Panama. The second is an indepth study of the dynamics of a saltgrass marsh, the financing of which will be primarily from a Department of Energy (DOE) grant. A long-term, program at the Edgewater Center on the nutrient dynamics of the Rhode River will continue with funding from the Chesapeake Research Consortium.

The Zoological Park intends to strengthen its curation and animal care abilities to service the new facilities now under construction at its central Rock Creek, and Front Royal, Virginia, facilities. Scientists at the Zoo have started a new program in the health and genetics of captive animals and have been successful in raising some private funds to finance their efforts; a national campaign is under way to insure long-term financial stability.

Smithsonian biologists throughout the Institution have started a modest research program in molecular systematics and evolution. Recent technical advances in electrophoresis and chromatography have opened new ways to study the evolutionary process in plants and animals. To take advantage of these new techniques, the Institution has initiated a multi-bureau effort to equip laboratories at the Museum of Natural History, the Tropical Research Institute and the Zoological Park with the necessary equipment to exploit this new approach. Some funds remaining



Workmen move Hydrolab into the National Museum of Natural History. The 18-foot long, 8-foot high tanklike underwater research habitat is the largest manmade object ever transported to the Museum for an exhibition. It is on long-term loan from the National Oceanic and Atmospheric Administration. Photo by Chip Clark.

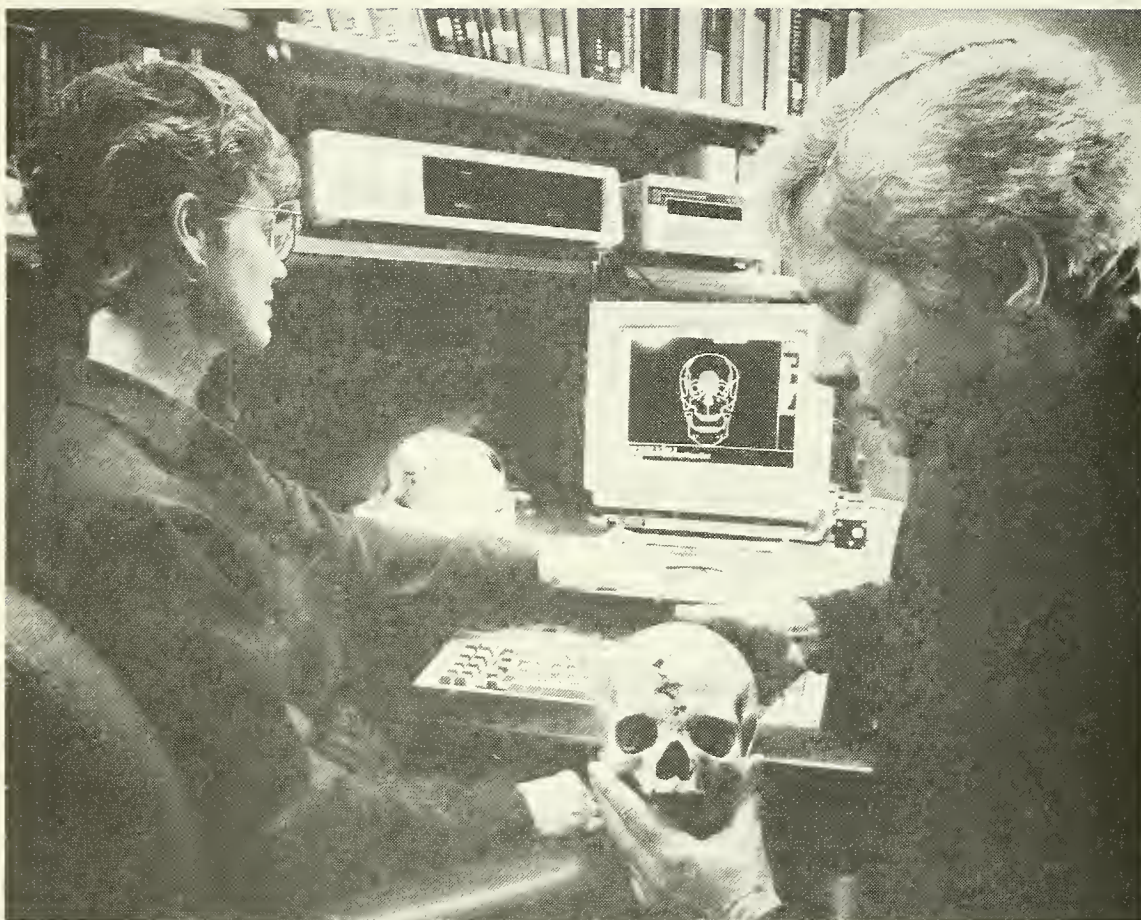
from the termination of the Rockville, Maryland laboratory may be redirected to these efforts.

Understanding our universe is the focus of research activities at the Astrophysical Observatory (SAO). A major goal of SAO is to develop an array of submillimeter telescopes that would represent a bold next step in the exploration of space through ground based astronomy. By studying the universe with instruments of high resolving power at submillimeter wavelengths, observations can be made of the birth of stars, research can be furthered on cores of quasars and galaxies, and perhaps other planetary systems can be detected. In cooperation with the University of Arizona, plans are being developed to upgrade the Multiple Mirror Telescope (MMT), now the world's third largest optical instrument, by replacing its current six-mirror configuration with a single large mirror 6.5 meters in diameter. Advanced planning is currently underway. The Air and Space Museum (NASM) will continue to develop its research capabilities in image processing of space borne missions to gain further insights into the mechanisms that form and modify planetary surfaces. In addition, historical research will continue to document man's progress in probing beyond our own planet. A long range program has been started at NASM to store Air and Space archives on laser readable discs. Already some 200,000 airplane photographs have been successfully digitized on such discs and are available to the public and other museums. NASM is a pioneer in the development of this technology.

Research in the art museums continues to produce quality publications in the form of exhibit catalogues and other scholarly works. Greater communication and coordination of efforts among various bureaus (especially in American oriented activity) is an objective. One major step in this direction is the new journal proposed by the Museum of American Art. At the Museum of American History, plans are under way to develop a research center to assemble scholars working on the various social components of the history of science and technology. Heretofore, much emphasis has been placed on the history of the actual hardware and objects; new research goals will broaden the emphases to include more of the cultural components of American technological history.

The Joseph Henry Papers will continue to publish and disseminate its volumes on the life and contribution of the Institution's first Secretary, Joseph Henry. The Smithsonian Archives needs additional storage space, and as a major source of historical research documents, facilities will need improvement for adequate records maintenance and access. Considerable attention will need to be placed in future years on utilizing modern technology for storage and retrieval of archival records. The Smithsonian Libraries, another major institutional research support service, requires attention in a number of ways. Most significant is the implementation of a long range plan of book preservation; many portions of the collections are in danger of disintegrating. In addition, automated bibliographic systems need to be more completely developed and integrated into library operations, and increased space for the collections will require greater consideration in the future.

An increasing necessity of modern day research is the regular replacement of equipment and acquisition of new state of the art



Dr. Donald Ortner and research assistant Janet Beck computerize information gleaned from the study of Natural History's extensive skeletal collection. Dr. Ortner is holding a skull from Gabon, Africa- which shows signs of chronic infection. Photo by Dane Penland.

instruments. Computers and other instrumentation are as vital to today's scholars as the microscope was to 19th century scientists. A major effort must continue for equipment acquisition/replacement funds.

In addition to equipment, planning will continue regarding development of research/support facilities for the Tropical Research Institute (in Panama) and for the Astrophysical Observatory (the Whipple Observatory at Mount Hopkins, Arizona). A request of \$2,800,000 for a new laboratory on Barro Colorado Island for the Tropical Research Institute is contained in the FY 1988 budget. A support base camp at the Whipple Observatory (\$4,500,000) is also a critical priority, and is being sought in FY 1988. Planning must continue for the Air and Space Museum storage and exhibit areas at Dulles International Airport. Renovation and new construction for these and other bureaus are needed to strengthen programs and to meet future operational responsibilities. Additional information on facilities requirements is presented in the Facilities chapter.

Detailed projections for bureaus and offices reporting to the Assistant Secretary for Research appear in Appendix I. Overall projections amount to around \$67 million in FY 1992, or about \$13 million above FY 1986 levels with most of the increase associated with federal appropriations for the Astrophysical Observatory, Zoological Park, and Tropical Research Institute. Trust support may increase somewhat over the planning period; grant and contract work is difficult to project because of the uncertainty surrounding future years federal funding of source agencies.



Crowds overflowed the Air and Space Museum's Langley Theater to hear Carl Sagan during a free public lecture to celebrate the return of Halley's Comet. This was one of many activities offered during the tenth anniversary year of NASM.

MUSEUMS

Fiscal year 1986 has been marked by some top administrative restructuring at the Smithsonian Institution. It includes the establishment of two new positions; the Assistant Secretary for Museums and the Assistant Secretary for Research. These offices supersede and reconfigure the Assistant Secretaries for Science, History and Art, and Museum Programs.

Under the new organization, oversight is more-or-less based on programmatic function rather than subject matter. Smithsonian programs relating to research are overseen by the Assistant Secretary for Research; programs relating to museum exhibitions, object interpretation, professional training, and collections are under the aegis of the Assistant Secretary for Museums.

Smithsonian museums and galleries, along with some supporting activities, report to the Assistant Secretary for Museums: these include the Anacostia Neighborhood Museum, Center for Asian Art (including both the Freer Gallery of Art and the Arthur M. Sackler Gallery), Cooper-Hewitt Museum, Hirshhorn Museum and Sculpture Garden, Air and Space Museum, Museum of African Art, Museum of American Art and the Renwick Gallery, Museum of American History, Museum of Natural History/Museum of Man, and the Portrait Gallery. The Assistant Secretary for Museums also oversees the Archives of American Art, Traveling Exhibition Service (SITES), the Office of Horticulture, Conservation Analytical Laboratory, National Museum Act, Office of Exhibits Central, Office of Museum Programs, Office of the Registrar, and South Group Buildings Management.

Information on the Office of Horticulture and South Group Buildings Management appears in the chapter on Administration, Financial and Other Support Services to be consistent with the FY 1988 budget presentation to the Office of Management and Budget.

Current and Projected Resources

As Smithsonian collections have grown, so have the resources associated with their exhibition, care, and research. Current funding for Museum activities consists of a mixture of appropriated federal funds, infrequent federal grants and contracts, nonappropriated restricted trust funds, and allocations of nonappropriated unrestricted trust funds. In FY 1986, resources available to the Assistant Secretary for Museums amounted to approximately \$91,000,000 and 1,758 full-time positions. About 71 percent of the dollar figure and 90 percent of the personnel represent federally appropriated support for basic exhibit, research, education, and administrative activities of the museums, galleries and other offices. Most of the balance consists of resources associated with trust operations, with only a small portion originating in federal grant and contract work. A breakdown of FY 1986 and projected FY 1992 levels of resources follows:

<u>Source of Funds</u>	<u>FY 1986</u>		<u>Projected FY 1992</u>	
	<u>Full-Time Employment</u>	<u>Funds (\$000)</u>	<u>FTE</u>	<u>Funds (\$000)</u>
Federal Salaries & Expenses	1,566	\$64,362	1,749	\$ 79,115
Unrestricted trust	99	15,822	101	11,549
Restricted trust	62	9,435	51	8,731
Federal Grants & Contracts	31	1,500	28	1,566
Total	1,758	\$91,119	1,929	\$100,961

Generally, the Museum of American History, the Museum of Natural History/Museum of Man, the Museum of American Art, the Hirshhorn Museum and Sculpture Garden, the Portrait Gallery, the Anacostia Neighborhood Museum, Office of Museum Programs, Conservation Analytical Laboratory, Office of Exhibit Central, National Museum Act and Office of the Registrar are supported predominantly with federal funds. Their exhibition, research, collections management, and building operations comprise their major expenses. Organizations which work with fairly evenly mixed financing include the Cooper-Hewitt Museum, Museum of African Art, and the Archives of American Art.

Unrestricted trust fund support is concentrated primarily in the Cooper-Hewitt Museum, Archives of American Art, Museum of American History, SITES, and the Air and Space Museum. Restricted trust fund support is largely directed to the operations associated with the Freer Gallery of Art, the Cooper-Hewitt Museum, the Archives of American Art, Office of Museum Programs, Traveling Exhibition Service, and the Museum of Natural History/Museum of Man. Most of the grant and contract work is present in the Museum of Natural History/Museum of Man. The Cooper-Hewitt Museum receives an annual allocation of Smithsonian unrestricted trust funds to help support its programs; beginning in 1979, federal funds supported a small portion of the exhibition program as well as the costs of maintaining and protecting the building and collections and a share of administrative costs. In addition, the Cooper-Hewitt Museum raises in excess of a million dollars annually to support its exhibitions and related educational activities. The Museum of African Art raises from \$25,000 to \$50,000 per year from private sources to finance educational activities and acquisitions. The Archives of American Art's Board of Trustees raises between \$500,000 and \$600,000 each year to support more than one-half of the Archives' program. Only the Traveling Exhibition Service has the majority of its support provided from unrestricted (\$1,861,000) and restricted trust funds (\$842,000), which constitute 86 per cent of its resources in FY 1986. In FY 1986, the Kellogg Foundation awarded the Office of Museum Programs (working in conjunction with the Resident Associate Program) a second three year grant to foster the educational influence of museums; the first grant began in FY 1982.



Alicia Taylor leads a children's workshop held in conjunction with the exhibition, Praise Poems: The Katherine White Collection, at the National Museum of African Art. This type of workshop will continue to be offered at the museum's new quarters in the Quadrangle.

Apart from this, the Office of Museum Programs has revolving trust fund budgets to receive revenues for handling and shipping costs associated with audiovisual programs on conservation information. The Office of Horticulture, South Group Buildings Management and the Office of Exhibits Central have small trust fund accounts to provide support for trust fund activities.

In addition to this general pattern of fund availability and use, most of these organizations are eligible for allocations from the special trust fund Collections Acquisition, Scholarly Studies, Education, and Special Exhibition Programs. They also enjoy the presence of interns and pre- and postdoctoral research fellows selected competitively through the Smithsonian's fellowship awards program and funded with nonappropriated unrestricted trust funds.

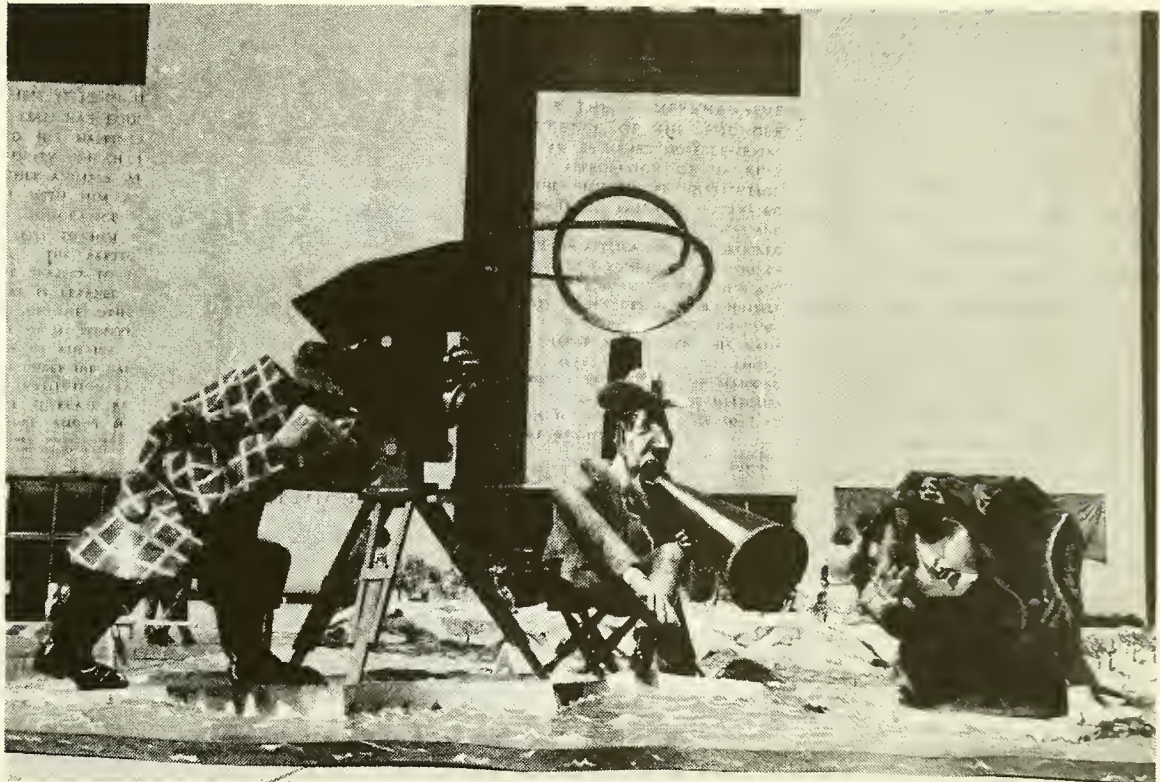
Future Year Prospectus

Because of uncertainties surrounding the future year impact of Public Law 99-177 on institutional resource levels, additional federal program resources beyond FY 1987 for most Museum activities are projected at minimum levels in the Five-Year Prospectus, along with resources to be sought to cover uncontrollable expenses such as necessary pay and inflation.

Now that the building structure has been completed, efforts will concentrate on the establishment of Quadrangle operating programs. The building is home to the Arthur M. Sackler Gallery and the African Art Museum, along with the Directorate of International Activities, the Resident and National Associates Programs and the Traveling Exhibitions Service. The two museums will move to the building in the fall of 1986; the public opening is scheduled for 1987. Federal resources for program development in such areas as collections management, exhibitions, and education, will amount to about \$7 million in FY 1992 for both museums, or approximately \$1 million more than the request for FY 1988. In addition to the Museum of African Art and the Sackler Gallery, federal resources for basic building management, security, and utility costs, and other program support by 1992, should total about \$7.5 million. Operational resource projections for occupants of the Quadrangle are summarized in Table 5.

Interpretation and communication of the various museum activities to the broader museum community will continue to be a priority, with increased emphasis from the Office of the Assistant Secretary for Museums. Because so many of the world's museums look to the Smithsonian for leadership in this field, we shall have to assert that leadership aggressively and thoughtfully. The same is true in the realm of professional training, where the Smithsonian has long managed a number of significant programs. Museum training is becoming more sophisticated and requires constant incorporation of new approaches to assure that colleagues are being served in quality ways.

The emphasis on collections management, research, and automation activities continue as Museum priorities. Base line collections inventory, completed in FY 1983 helped to focus attention on the growing challenges



"Way Down East" is installed on the south terrace of the National Museum of American History as part of the exhibition, Hollywood: Legend and Reality. Photo by Richard Hofmeister.

of collections storage and conservation. Accessibility to collections and collections information for scholarly research and management requires continued attention and improvement to storage facilities. Collections of the Smithsonian art community are particularly in need of creative storage solutions as are those of the Air and Space Museum because of the large scale of NASM acquisitions. The Smithsonian is developing and using automated technologies for information retrieval, object control and data management in the collections arena. Timely, accessible, and meticulous collections records are viewed as necessary for the prudent management of the Nation's patrimony and programs to this end continue. The challenge to the Institution is to move ahead with collections management in a time when adequate resources may not be available.

Many areas of research at the Smithsonian have been traditionally driven by the collections. Currently, various bureaus are engaged to differing degrees in research on their diverse collections; Appendix II contains some descriptions of these activities. In future years, use of the collections for research at the Smithsonian will increase. The recent inventory has brought into focus for Smithsonian and other researchers the variety, range, and depth of the collections, and the information potential they represent. The establishment of research and conservation laboratories and curatorial areas at the Museum Support Center, the provision of additional internships and fellowships, the upgrading and replacement of research equipment, and the growing importance of the Institution's international functions combine to provide a strengthened base from which collections oriented research can receive greater emphasis in future years. In addition, archaeometric studies will become increasingly important. In studying man-made objects, form and decoration have classically been the differentiators establishing provenance. With the advent of archaeometry, the chemical composition, internal structure and other physical characteristics of objects can be quantified and statistically analyzed by computer techniques. Such studies need large numbers of objects of known provenance to be sampled, accurately measured and the data stored in an accessible manner. The Smithsonian Archaeometric Research Collections and Records (SARCAR) of the Conservation Analytical Laboratory have been set up to focus research in this area and to maintain a bank of data and samples.

Initial activities for the Conservation Analytical Laboratory training program include a series of seminars for advanced specialists, refresher courses for practicing conservators, practical internships for students in conservation training programs and advanced internships for graduates of such programs. A new entry level training program for furniture conservators begun. Based upon experience gained through these activities and on careful evaluation of the needs of the profession, future directions for the program will be identified and incorporated. CAL will consult closely with other training programs to assure that the Institution's role in national conservation training endeavors is appropriate. The internal staff structure of the Laboratory has been reorganized to accommodate its larger size and its several specialized functions. Working from these foundations, the Laboratory will be in a substantially stronger position to offer support to the Institution's museums and to museums generally through its research programs in conservation technology, its information program for conservation

professionals, its training activities, its support activities in conservation treatment and analysis, conservation science and archaeometry.

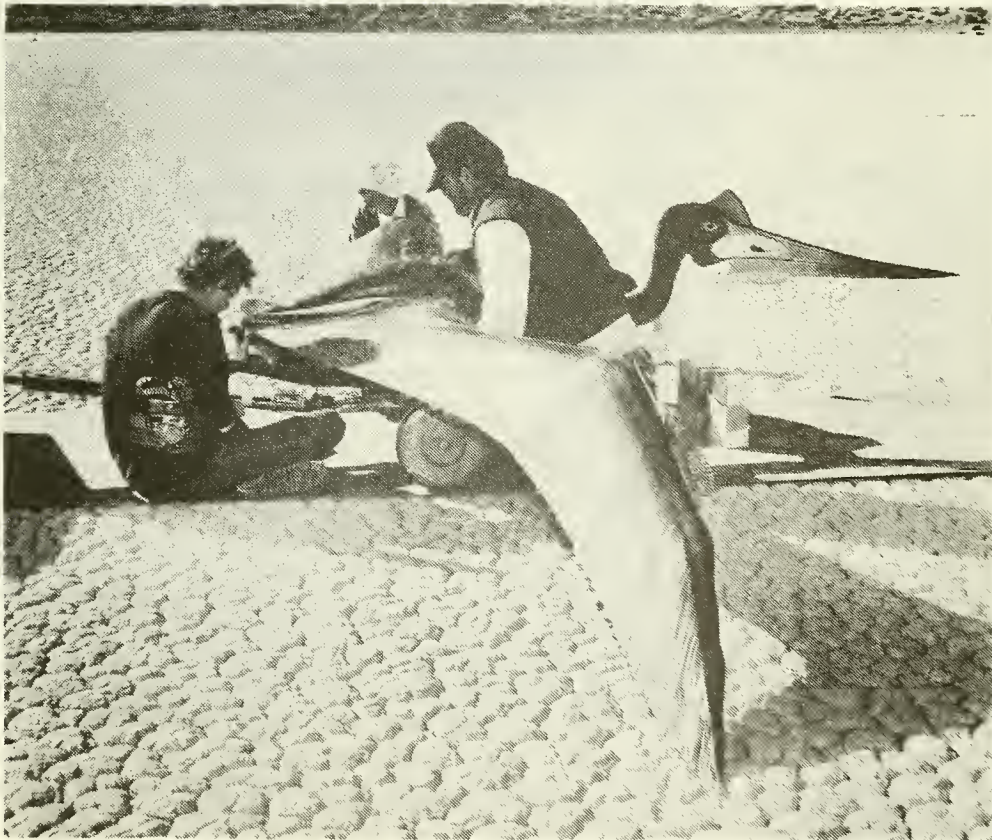
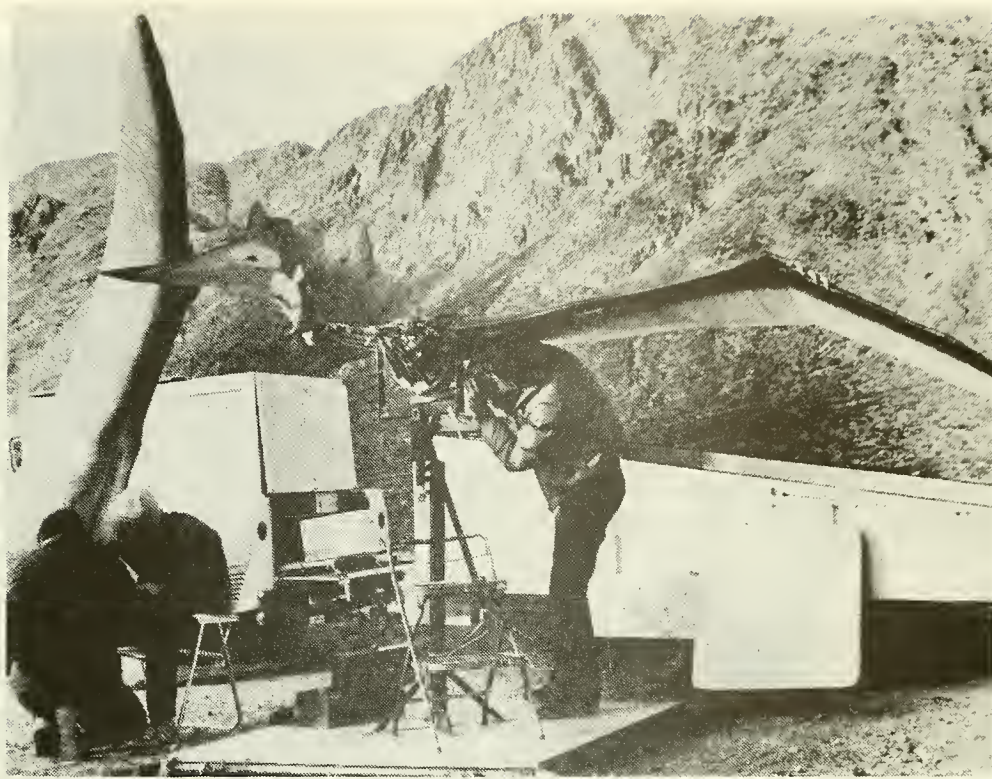
The Museum of American History continues to plan for improvements to its research capabilities through the creation of a Center for the study of American History. This program would combine existing research centers at the Museum, formalize relationships with several universities, promote new affiliations, and provide encouragement and opportunity for intramural research. The Museum also continues to develop long range space plans for the next twenty years based on current collections growth and related requirements.

At the National Museum of Natural History/Museum of Man, where true base line information on the collections is not yet complete, staff will continue to create new item and batch level data (i.e., refinement of collection level records) while updating and maintaining the growing inventory data base numbering some 3,000,000 records. The Museum is committed to a sound integrated collections management program which will guarantee better, safer care and easier access to the nation's millions of stored treasures for the education, enjoyment, and scholarly research purposes for people world-wide. Also, the Museum has recognized that advances in biological, physical and anthropological sciences are out pacing the rate at which permanent exhibits are being renovated causing many displays to be badly out of date. Therefore, the Museum will seek to maintain the integrity of its permanent exhibit halls within available resources. The Air and Space Museum will continue to develop innovative exhibitions although schedules may be stretched out to meet limited resources due to budgetary constraints. The new IMAX film "On the Wing" premiered at the Museum in early summer 1986, and another film is under conceptual development.

The bicentennial of the United States Constitution will be the second of the major celebrations marking the birth of our nation (the bicentennial of the American Revolution in 1976 being the first). This historic period (the draft of the Constitution was approved in September 1787 but not fully ratified until July 1788) will be marked with exhibitions, lectures, film, and symposia which will reacquaint today's generation with the historical context of our constitutional roots and their development over time. In particular, the Museum of American History will open, in the fall of 1987, an exhibition and related programs on "The Japanese American Experience in World War II." This exhibit will deal with the complex problems facing national and state decision makers during World War II, when they had to balance constitutional guarantees of civil rights against the perceived requirements for military security. The exhibition will particularly focus on issues of civil rights for Japanese Americans and on their patriotic contributions during World War II. "The Portrait in America from 1700 to 1776" will, through portraits of the period, serve as a valuable source of information about American culture during the period leading up to the drafting of the Constitution. This exhibition is scheduled to open at the Portrait Gallery in October 1987. In the spring of 1989, the Portrait Gallery plans to offer "Portraits of Distinguished American Jurists," an exhibition which will evoke the rich personalities and abilities that came into play in



Visitors enjoy two paintings at the opening of The Art of New Mexico exhibition at the National Museum of American Art.



AeroVironment, Inc. engineering staff members assemble (above) and prepare to launch (below) the flying replica of the giant prehistoric pterodactyl *Quetzalcoatlus northropi* (QN) which appears in "ON THE WING," a new film which premiered at the National Air and Space Museum. Photos by S.C. Johnson & Son, Inc.



Young visitor enjoys a Target painting by Kenneth Noland at the Hirshhorn Museum.

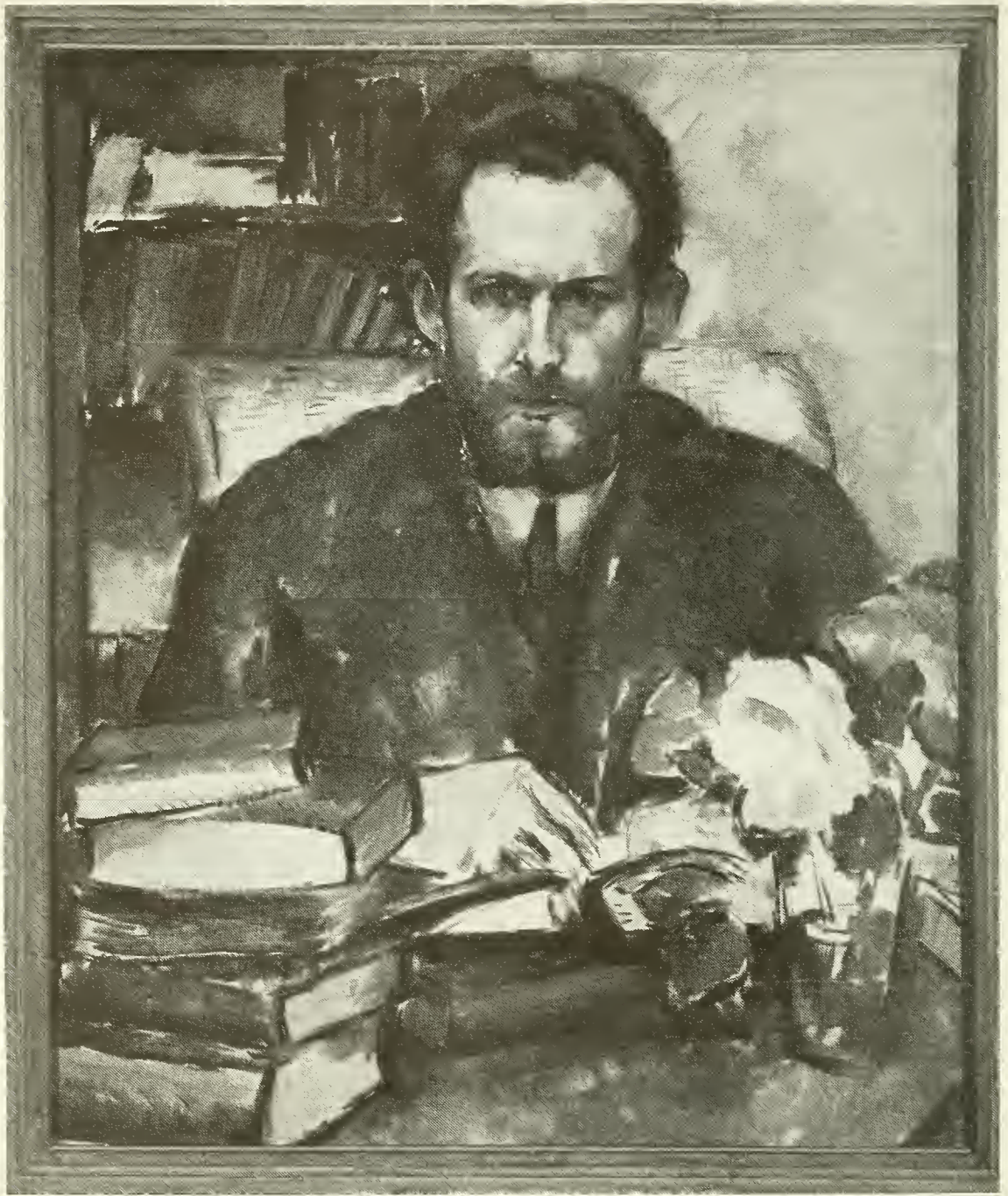
determining the evolution of this country's legal processes and institutions. Other Bicentennial programs will be offered by the Resident Associate Program, the Office of Elementary and Secondary Education and a major international symposium on "Constitutional Roots, Rights and Responsibility.

In November 1986 the Museum of American History will open its second major permanent exhibition entitled, "Engines of Change: The Industrial Revolution in America, 1790-1860." This exhibition will show how the Industrial Revolution in America brought tools for transforming energy, new ways of organizing work, and a new entrepreneurial spirit to the United States. This gradual reinstallation of new permanent exhibitions, given necessary financial support, will take place at the pace of at least one a year. Major exhibitions are planned on the "Information Revolution" and commemoration of the Quincentenary of Columbus' arrival in the new World. Development of a new Native American Program, being jointly developed with the Natural History Museum, will also proceed.

Exhibitions, of course, continue to be our most visible means of communicating our interests and knowledge to the visiting museum public. The Institution, under its new organization, will undertake a comprehensive look at the costs of its current exhibiting enterprise, whether it is money well-spent, and whether there are ways of stretching our exhibition budgets further. In a period of increasing austerity, the Institution needs to consider how the total exhibition program can be made more effective in various museums and in serving various audiences.

The Anacostia Neighborhood Museum's (ANM) new Annex was completed in FY 1986. Its public opening will be in the spring of 1987. This wing will enable the ANM to discontinue the lease on the old Carver Theatre and consolidate all of its activities -- exhibitions, education, and research staff -- in one location. A comprehensive survey of collections begun in FY 1985, with the Museum of American History, to identify artifacts and material with significant Black American relevance will also be completed in FY 1986. Study of these materials will lead to new insights and a greater understanding of the history and culture of Black America. Through such initiatives, the Anacostia Museum will be seeking a stronger role in its educational activities and in planning for further development for the 1990s.

In 1984, the Congress authorized the transfer of the Old Post Office Building to the Smithsonian. Concept and space planning for the renovation of the building has been initiated. Detailed design requests are planned for FY 1989. Presently this building is envisioned to be used as an expansion of Smithsonian's Gallery Place which houses American Art, the Portrait Gallery, and the Archives of American Art. Together, these three organizations -- their collections, historical documents and staff resources -- form the nucleus of what has become (and will continue to develop as) a major center for the study of American art and material culture. Eventual restoration of the Old Post Office Building will enable these operations to accommodate public demand for programs, and to continue development of research programs, exhibitions, lectures, publications, and collections.



A recent acquisition of the National Portrait Gallery is this oil on canvas painting of Willard Huntington Wright (also known as S.S. Van Dine) by his brother Stanton MacDonald Wright. This purchase was made possible through a grant from the James Smithson Society.

Improving the care of collections also is planned by the Cooper-Hewitt Museum, but added resources are needed to provide professional care to the wall covering collection, which currently has no curator, as well as to increase professional curatorial assistance in the prints and drawings, decorative arts, and textiles departments. Space improvements are also being planned. The Carnegie Mansion renovation in the 1970s resulted in climate controlled areas and conservation facilities for the prints, drawings, and textiles collections. Significant improvements in space for the large and important decorative arts collections (furniture, glass, etc.) and the wall covering collection, now housed in largely inaccessible areas in the mansion and the adjacent deteriorating Miller House, are needed. Creation of collection storage areas, and exhibition and education facilities are basic to future year operations of the Cooper-Hewitt. Construction is estimated to cost around \$25,000,000 and a capital campaign effort to raise about one-half the requirement has begun. Appropriations for construction will be sought as fund raising efforts are assured. This facilities project will provide for the safekeeping, care and exhibition of these collections for generations to come.

Planning must also be undertaken for Air and Space Museum storage and exhibit areas at Dulles International Airport. Renovations and new construction is needed to strengthen programs and to meet new responsibilities for public display of large air and space objects, such as the space shuttle.

The Museum of American History has not been immune to the pressures for more space. In 1985, the Museum began to plan the move of some collections and objects from the Mall to the Institution's Museum Support Center in Suitland, Maryland. During FY 1986, the process continued with refining records, photographing, cleaning, packing, and storing objects in anticipation of eventual transfer. Relocation of collections to the Support Center will free valuable museum space for exhibitions and provide safer and more secure environmental conditions for individual objects.

These various construction and renovation efforts represent by far the largest need for direct new funding on the part of Museum bureaus of the Smithsonian. Additional information is contained in the Facilities chapter and the Beyond 1992 chapter of this document.

The Office of Museum Programs (OMP) will work with other units in strengthening Native American Programs in general. The number of qualified Native Americans available to serve the more than 100 tribal museums and cultural centers remains discouragingly small. Although these museums hold remarkable and important collections of historical and ethnological materials, they lack resources to provide the required training themselves, or to obtain much needed technical assistance for their museum operations. The informational audiovisual programs dealing with preventive maintenance and care of collections in museums continue to be in great demand. OMP will increase the number of subjects covered by these slide sets and videotapes.

Annually, the Office of Exhibits Central (OEC) serves approximately forty Smithsonian units and is involved in some two hundred and fifty

projects. OEC is a major source of exhibit support for the Traveling Exhibition Service for its national and international exhibition programs. To maintain productive capacity in the coming years, the Office of Exhibits Central needs to add some exhibit professionals to its staff, and these increases are incorporated into the projections. These positions would help to fill Institution-wide demand for design and editing services, model making, graphics production, and exhibit fabrication.

The Traveling Exhibition Service (SITES) has moved into the Quadrangle where it will continue to cooperate with Smithsonian bureaus, including the International Center, in the initiation, production and interpretation of exhibitions. SITES domestic and international programs have enjoyed great success and a number of new exhibitions are scheduled for travel, with others in the planning stages. "The Paris Style: Art Nouveau Bing" will begin its tour with an opening in the Virginia Museum of Fine Arts, Richmond, in September 1986, and "Gauguin and His Circle in Brittany-The Prints" will be shown in the Netherlands then continue its tour in the U.S. The Smithsonian exchange project with the U.S.S.R. is set with an opening and tour in the U.S. of "Russia, the Land, the People: Russian Painting 1850-1910," in October 1986, and the opening and tour in the U.S.S.R. of "New Horizons: American Painting 1850-1910," in October 1987. SITES' exhibition, "Hollywood: Legend and Reality" began its U.S. and international tour with a showing at the National Museum of American History. After touring in the U.S. the Hollywood exhibition will travel to Europe and Japan. SITES works in collaboration with nearly all Smithsonian museums, and the exhibitions reflect a broad range of topics, taking the Institution's interests to major museums, as well as to small libraries and cultural centers.

The National Museum Act (NMA) has made grants to museums, academic institutions, and museum associations for the purpose of enhancing professionalism in the museum community, advancing knowledge about critical museum-related problems, and disseminating information through seminars and publications. Through its various programs over the years, the Act has emphasized conservation and the improvement of preservation practices. For FY 1987, the National Museum Act has not been reauthorized. The Smithsonian hopes to use this funding in FY 1987, if appropriated, to support initiatives in conservation research and other basic cooperative endeavors in museum programs.

In summary, federal resources are projected to amount to about \$79,000,000 in FY 1992, with a large portion of the increases over FY 1986 levels associated with various aspects of Quadrangle program operations being sought in FY 1987-88; e.g., for the Museum of African Art, Sackler Gallery and other programs. Other major requirements are associated with the Museum of Natural History and the Museum of American History. Restricted and unrestricted expenses are expected to remain about stable; the period between FY 1986 and FY 1992 reflects largely the expensing and accounting for the purchase of the Vever collection of Islamic and Persian Art for the Sackler Gallery in FY 1986. Grant and contract activity is expected to continue to be only a small portion of overall resources. Detailed projections for Museum activities are contained in Appendix I.

PUBLIC SERVICE

The Public Service programs are the central focus for the Institution's "diffusion of knowledge" activities. These are: Smithsonian magazine, contained within the Associates Program chapter because of the general support the magazine provides to many programs of the Institution and because it is viewed as a major benefit to Associates; Smithsonian Institution Press, including the university press publications, popular books marketed through direct mail, and the Smithsonian Recordings Program; Office of Elementary and Secondary Education, contained within the Special Programs chapter to provide consistency with the FY 1988 budget presentation; Visitor Information and Associate Reception Center; the Office of Telecommunications; the Office of Public Affairs; the office which coordinates the work of the Committee for a Wider Audience; the Office of Smithsonian Symposia and Seminars; the National Science Resources Center; and the Office of Folklife Programs. The latter three offices also are incorporated within the Special Programs chapter to be consistent with the budget submission. The Office of Smithsonian Symposia and Seminars and the Office of Folklife Programs carry out research activities in conjunction with their public outreach and diffusion activities. The vigorous growth of Smithsonian outreach trust funded programs can be attributed largely to the success of the Magazine. Through the application of trust funds generated by the Magazine and other revenue producing activities, a variety of valuable research activities, conferences, publications, and other projects have been made available in recent years to the public. While these projects enrich the kinds of services provided, the Institution has as a result been able to reduce the requirements for federal appropriations.

Current and Projected Resources

Resources in FY 1986 devoted to Public Service activities amounted to about \$18,000,000 and 125 full-time employees. Total funding in FY 1986 consisted of approximately 13 percent federal appropriations and 87 percent nonappropriated unrestricted trust funds. The largest amount of support for Public Service programs comes from the Institution's trust operations, and unrestricted trust fund support is, for the most part, concentrated in the expenses of the Smithsonian Press which derives these resources from the sale of trust funded books and records, royalties, and special publishing services. These funds support about one-half of the Press staff and also provide for the necessary services required to develop, market, warehouse, and distribute records and scholarly and general interest books, which are published in connection with the Institution's research, collections, exhibitions, and other programs. Federal appropriations largely support the publication of the basic technical and scientific series distributed by the Government Printing Office, other publications and conferences, and a portion of the staff and operations of the Institution's centralized film and television operations. The Visitor Information and Associates' Reception Center and the Office of Telecommunications are operated primarily with trust funds. Restricted purpose funds are occasionally obtained for support of special



Louise Steele, a Smithsonian volunteer information receptionist and Castle docent for 16 years, was selected as the outstanding volunteer for 1986 by the Washington Convention and Visitor Association (WCVA). Mrs. Steele is shown receiving the first annual WCVA Hospitality Award for volunteers serving visitors to the Nation's Capital.

activities sponsored by various units; for example, funds to support major film projects of the Office of Telecommunications.

A breakdown of FY 1986 and projected FY 1992 levels of resources follows:

<u>Source of Funds</u>	<u>FY 1986</u>		<u>Projected FY 1992</u>	
	<u>Full Time Employment</u>	<u>Funds (\$000s)</u>	<u>FTE</u>	<u>(\$000s)</u>
Federal Salaries & Expenses	52	\$ 2,224	53	\$ 2,407
Unrestricted trust	73	15,481	73	21,528
Restricted trust	-	12	-	-
Federal Grants & Contracts	-	-	-	-
Total	125	\$17,717	126	\$23,935

Future Year Prospectus

Because of uncertainties surrounding the future year impact of Public Law 99-177 on the Institution's resource levels, projections of additional federal program increases for Public Service activities are minimal, although some added amounts will be sought to cover uncontrollable expenses such as necessary pay and inflation. Public Service activities play a key role in placing the Smithsonian in contact annually with an estimated public of over 85 million individuals through publications, recordings, television, and films. Some units (Office of Smithsonian Symposia and Seminars, Office of Folklife Programs) are involved in non-collection-based increase and diffusion endeavors while others (Visitor Information and Associates' Reception Center, Office of Public Affairs, Office of Telecommunications) furnish support services to the entire Institution. Smithsonian Institution Press, Smithsonian magazine, Office of Smithsonian Symposia and Seminars, Office of Telecommunications, Office of Folklife Programs, Office of Elementary and Secondary Education, and the Office of Public Affairs produce a broad range of publications; the Office of Elementary and Secondary Education provides the Institution's major links with school systems locally and across the nation. Public Service programs and services constitute the Institution's major delivery systems for research and educational materials serving the Smithsonian's domestic and international network of individuals and organizations.

Developing more effective uses of media in the coming years is perhaps the greatest challenge facing the Smithsonian under one of its two chartered responsibilities, the diffusion of knowledge. As an outgrowth of many meetings with Smithsonian staff and others, a comprehensive media approach is being designed with the potential to transform the process of bringing knowledge into the classroom and to the general public, across the United States and abroad. "Smithsonian Electronic Education" (SEE) is

an approach that combines the best of television, textbooks, and the interactive disk. There are a number of ongoing Smithsonian activities planned around the new information technology that complement and reinforce SEE. In collaboration with the National Academy of Sciences, the Institution has established the National Science Resources Center (NSRC) to help revitalize the teaching of precollege science and mathematics. The main focus of the NSRC (contained within the Special Programs Chapter) will be to provide resources for precollege science and mathematics education to teachers across the country. The Center will augment regional efforts to improve science and mathematics teaching by serving as an information center to identify and disseminate high quality teaching resources to teachers and school systems. It will also serve as a focal point for the translation of new scientific developments and knowledge about the learning process into effective resources for teaching science and mathematics. NSRC will organize professional development institutes for selected teachers, principals, and curriculum supervisors to encourage the sharing of successful materials and programs, and assist in building a talent pool to help staff local program improvement efforts.

In FY 1987, the Office of Elementary and Secondary Education, the Office of Smithsonian Symposia and Seminars and the NSRC, while retaining their autonomy, will be consolidated under the heading of the Office of Smithsonian Education Programs. The merging of these three units will bring Smithsonian education into sharper focus and will improve its quality and cost effectiveness over the next several years. The merger is expected to play an important complementary role in launching and stabilizing the new starts in electronic media.

A National Demonstration Laboratory for interactive Educational Technologies (NDL) is an additional converging effort established in association with the Interactive Videodisc Consortium, an organization of public broadcasting stations supported by the Corporation for Public Broadcasting. As a primary goal for its first few years, the NDL will set up a demonstration facility for planners of education programs to examine interactive technologies. Future year activities may include sponsoring symposia on related topics and conducting research on available interactive materials.

The absence of substantial projected federal support for program growth over the planning period constrains anticipated expansion of some Public Service activities. The Smithsonian Press, for example, would establish a section which would streamline the process of publishing many of the smaller, less complex bureau publications, such as booklets, flyers, floor plans, educational materials, posters, exhibition check-lists, newsletters, invitations, etc. These account for about 120 to 150 jobs per year out of the Press' total output of over 350 jobs. Increased funding would have freed present editorial and production staff to allow for the publication of an increasing number of yearly University Press Division books on subjects related to Smithsonian interests and activities. In the Office of Public Affairs, the Institution's ability to reach people around the nation with the news of its research and exploration, will continue at present levels.



Office of Telecommunications cameraman, John Hiller, and producer, Lee Cioffi, on the Mall at the 1986 Festival of American Folklife. Footage was used to produce a "HERE AT THE SMITHSONIAN..." television feature for national broadcast.

Over the planning period, only minor growth in resources is projected. Some additional trust funding is forecast for the Visitor Information and Associates' Reception Center to provide an increase in services to the general public and to respond to an expected growth in telephone and written inquiries. Over the period, work will continue towards completion of an orientation facility for visitor reception and information services in the Castle Building, initial funding of \$1,000,000 having been received from the Pew Memorial Trust. Overall trust funded activities are projected to increase from about \$16,000,000 in FY 1986 to approximately \$22,000,000 in FY 1992, but much of this is attributable to increases in expenses associated with revenue producing activities of the SI Press. Detailed projections for Public Service are contained in Appendix I.

DIRECTORATE OF INTERNATIONAL ACTIVITIES

The Directorate of International Activities was established in October, 1984 because of the growing importance of the Institution's international role in museum and collection management operations, research, exhibition techniques, and cultural and natural conservation. The function of the Directorate is to design and conduct a program to coordinate and balance all of the Institution's international activities, and to manage the International Center -- located in the Quadrangle Building -- the Office of Service and Protocol, and the Office of Publications Exchange. The Directorate also manages the Institution's Foreign Currency Program and is assigned overall responsibility for the Institution's commemoration of the 1992 Columbus Quincentenary. One of the Directorate's first initiatives was to identify the scope of the Smithsonian's current international activities. This has been published in the "Summary Profile of International Activities." The most recent "Profile" indicates approximately 1,000 projects underway during the past year. The Directorate acts as liaison with federal agencies and international organizations and institutions whose activities affecting scholars of other nations are congruent with those of the Smithsonian. The Institution's international activities will be publicly reflected in programs and operations of the Quadrangle's International Center, scheduled to open in 1987.

Current and Projected Resources

Most of the support for the Directorate in FY 1986 came from non-appropriated trust funds. Of the \$1,500,000 in available FY 1986 funds, approximately \$980,000 or 65 percent are nonappropriated. An breakdown of FY 1986 and projected FY 1992 resource levels follows.

<u>Source of Funds</u>	<u>FY 1986</u>		<u>Projected FY 1992</u>	
	<u>Full-time Employment</u>	<u>Funds (\$000S)</u>	<u>FTE</u>	<u>Funds (\$000s)</u>
Federal Salaries & Expenses	12	\$ 507	13	\$2,088
Unrestricted trust	11	694	11	910
Restricted trust	-	288	-	500
Federal Grants & Contracts	-	-	-	-
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Total	23	\$1,489	24	\$3,498

Within available resources, the Office of Service and Protocol will continue to provide basic services necessary for the coordination of international aspects of Smithsonian research and museum programs. The Office of Publications Exchange will continue to foster scholarly interchange by enabling learned societies and universities in the United States to exchange their publications with those of their foreign counterparts.

Plans continue for the inaugural exhibition and associated programs in the International Center. The exhibition titled "Generations" which is due to open in June 1987, with the public opening of the Quadrangle, is an investigation of multi-disciplinary, multi-cultural art and rituals associated with birth from ancient times to the present.

In other areas, a joint effort in conjunction with the National Academy of Science culminated in a September 1986 National Forum on BioDiversity. The Forum provided the public with the learned views of distinguished scientists and scholars on the subject of the rapid destruction of the Earth's natural habitats and the subsequent loss of plants and animals. The Forum also included a poster-panel exhibition, film showings, displays of literature and audio visual materials, and a national teleconference via satellite and cable.

The Directorate has undertaken a pilot three-year program in cooperation with the National Museum of Natural History and the International Man and the Biosphere Program for the design of a practical, standardized methodology for collecting and managing biotic inventory and other biological data in all Biosphere Reserves, potential Reserves and other endangered habitats. (A Biosphere Reserve is an area selected for protection and study because it is a representative example of one of the world's major ecosystems). The project will further comparative work and accelerate the pace of understanding the scope and scale of biological diversity in the world.

Future Year Prospectus

With regard to the International Center, modest growth is projected over FY 1988-92 for research and cultural studies, and increased public understanding of the Caribbean and Latin America. The second exhibition in the International Center Gallery will combine these new initiatives. Entitled "Tropical Forests: Disappearing Treasure," the exhibition aims to focus public attention on the crucial problem of the tropical forest - its ecology, its diversity, the threat to its existence, and the efforts being made to preserve it and to utilize it in a more environmentally and economically intelligent way. However, constrained federal support may well adversely affect the planned scope of this exhibition and its related programs. Consistent with the exhibition theme and purpose, International Center staff will also develop tropical biology and conservation workshops. It is intended that selected students and professionals from Latin America will participate in the workshops and will gain knowledge to apply to conservation concerns in their own countries. In addition, over the planning period an International Center visiting scholars program will be established to foster cross-disciplinary communications on subjects related to the goals of the International Center.

The most substantial growth reflected for the Directorate over the next five years mainly is associated with the Columbus Quincentenary. An overall Institution theme has been adopted for the 1992 Columbus commemoration, "Quincentenary: The Americas 1492-1992--Exploration of the Past - Encounter with the Present - Discovery of the Future." In FY 1987 program planning will be initiated in nine bureaus and offices in areas ranging from exhibition conceptualization to publications. Overall federal resources may approximate \$2,000,000 per year by FY 1992 for the

successful conduct and completion of institutional and Directorate activities. This long term program is directed at stimulating public and scholarly interest in the historical background of Columbus' voyage and its impact on the past and present cultures of North, Middle and South America.

SPECIAL PROGRAMS

Special Programs include the Offices of American Studies and Folklife Programs, the International Environmental Science Program, Academic and Educational Programs (including the Office of Symposia and Seminars, the Office of Elementary and Secondary Education, the Office of Fellowships and Grants, and the National Science Resources Center); the Collections Management/Inventory Program; and the trust funded Collections Acquisition, Scholarly Studies, Education, and Special Exhibition and Publication Programs. This chapter also contains the equipping, move, and operating requirements for the Museum Support Center. The resources associated with the International Environmental Science Program, the Fellowship Programs of the Institution, the Collections Management/ Inventory Program, and the trust funded Collections Acquisition, Scholarly Studies, Education, and Special Exhibition funds are generally available to all organizations of the Institution if they meet standards and selection procedures.

Current and Projected Resources

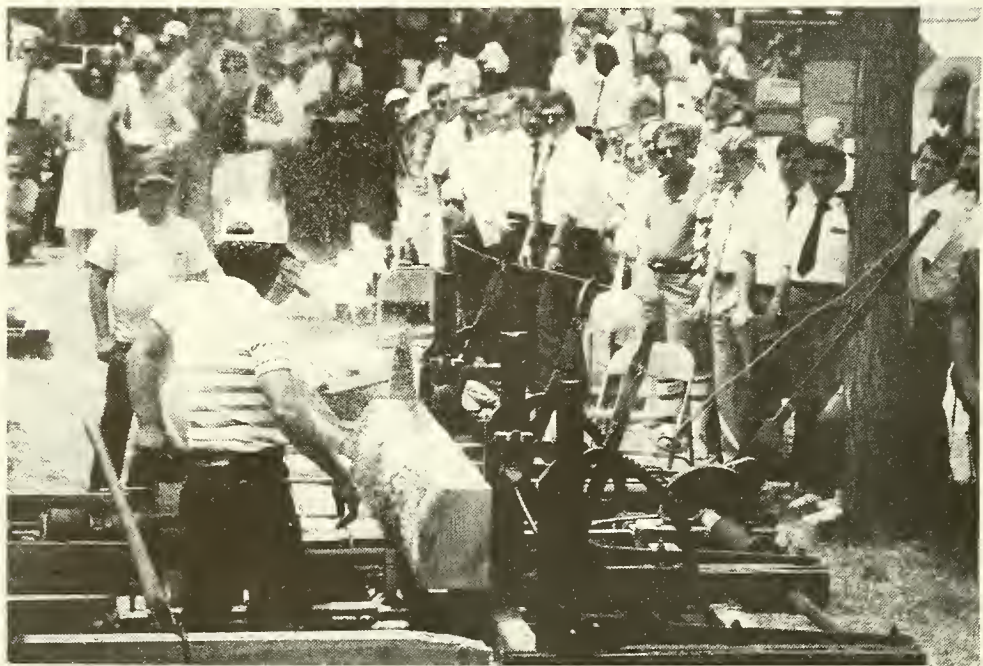
<u>Source of Funds</u>	<u>FY 1986</u>		<u>Projected FY 1992</u>	
	<u>Full-time Employment</u>	<u>Funds (\$000s)</u>	<u>FTE</u>	<u>Funds (\$000s)</u>
Federal Salaries & Expenses	114	\$ 8,130	138	\$ 6,757
Unrestricted trust	21	9,335	21	14,968
Restricted trust	-	671	-	850
Federal Grants & Contracts	-	345	-	732
 Total	 135	 \$18,481	 159	 \$23,307

Funding patterns vary, ranging from programs which are funded entirely from federal appropriations to those funded solely through trust operations of the Institution. Folklife Programs operate with both federal appropriations and trust funds and also seek grants and contracts for special projects. Federal funds support the Folklife administrative staff as well as office expenses; travel expenses; research and publication efforts; two-thirds of the cost associated with the annual folklife festival; and special projects. Trust funds support the salaries of the remaining permanent staff members, about one-third the cost of the annual festival, and some travel and office expenses. Grants and contracts are sought to augment programs at the annual festival.

Trust funds cover all direct costs of the Visiting Research Fellowships, the Regent's Fellowships, the Cooperative Education Program, and the James E. Webb Fellowship program. Administrative costs for the Office of Fellowships and Grants, the office which manages fellowship programs, are essentially federally funded.



Children try a Japanese Bon dance, led by Yoko King, at the 1986 Festival of American Folklife. Photo by Dane Penland.



Visitors at the 1986 Festival of American Folklife experience the operation of a Tennessee sawmill firsthand. Photo by Jeff Tinsley.

The Office of Folklife Programs engages in the documentation, analysis, presentation and conservation of living folklife traditions. In addition to the scholarly study of folklife, the Office endeavors through its public programs to give national recognition to, and to educate wider audiences about, a variety of traditional cultural forms. The Office of Elementary and Secondary Education conducts its basic activities through federal appropriations; trust funds or grants support special projects, meetings, or conferences. In addition to federal appropriations, the Office of Symposia and Seminars receives an annual allotment from trust funds for administration and direction of its activities, which include seeking outside support for the academic and intellectual meetings and publications which it designs and produces.

The International Environmental Research Program was established in the early 1970s to promote interbureau research on environmental matters by funding special, long-term projects using the principal scientific strengths of such organizations as the Tropical Research Institute, Smithsonian Environmental Research Center, Natural History Museum, and the Zoo.

Collections Management/Inventory Programs. In FY 1979, Congress appropriated special funds in the amount of \$500,000 to help the Institution begin conducting a major inventory of its various collections, including those being housed in the Museum Support Center. The initial inventory was completed in June 1983 with some one hundred million items documented in the collections. There is a real need to continue the program in future years. Since FY 1984 efforts have been concentrated on reconciling the inventory results with catalogue and other records, establishing routine procedures for entering data on incoming objects, refining the results of collections that were inventoried by batch rather than individual counts, and continuing to refine and improve the data processing systems for accessing information on the collections.

Collections Acquisition, Scholarly Studies, Education, and Special Exhibition Programs. In FY 1978, the Regents established a special trust account to be used for strengthening the Smithsonian's collections through purchase of major works of art and objects of scientific and historical value, and to allow for the funding of special projects important to the research and educational functions of the Institution. Since inception, about \$23,000,000 in unrestricted trust funds have been used by the programs. These funds, along with some earmarked in each year for similar purposes, make possible important activities in various museums and other bureaus of the Institution, including major acquisitions. The funds have also supported scholarly studies and educational efforts, scientific workshops and conferences, student intern programs, presentations, programs and performances for special groups including the handicapped and the elderly, and weekend films and lectures for the general public. Beginning in FY 1986, the Regents also approved funds for a special publications program; this effort is intended to support annual publication of one or two meritorious scholarly books by Smithsonian staff. It is anticipated, given available funds, that these Regents' programs will continue during the planning period.

Museum Support Center Equipment, Move and Operations. Since the opening of the Museum Support Center (MSC) in 1983, most of the planned



The Hanadaue group from Mibu village, Hiroshima Prefecture, Japan, performs a rice planting ritual (tabayashi) at the 1986 Festival of American Folklife. Photo by Jeff Tinsley.

laboratories have been established and become operational, and work on completing the rest of these facilities is proceeding. Administrative and facilities management functions, including the automated data processing center, continue to serve occupants and users of the MSC. The collections previously moved to the Center have been joined by recent additions, and more collections are being relocated to the facility. Five-eighths of the total of collection storage area will eventually be occupied by collections stored in factory produced cabinets placed on the main pod floor and two concrete decks, creating a three-level storage arrangement. One-quarter of the collections storage space will be occupied by a freestanding three-level steel shelving structure for storage of "wet" collections. One-eighth of the storage area will be occupied by collections stored in the "High Bay" mode. Twenty-four foot high pallet and cantilever racks will be used in this area to store large collections, such as whale skeletons, totem poles and war canoes. Detailed schedules covering all aspects of move-related tasks have been prepared for the initial move of all Smithsonian units involved in the relocation of collections. Certain collections are presently being placed in staging areas from which they will be moved as the various parts of the storage system become ready to receive them. Move activities, which are governed by strict procedures and standards established to safeguard the collections, are expected to continue through FY 1992.

Future Year Prospectus

Because of uncertainties surrounding the future year impact of Public Law 99-177 on the Institution's resource levels, projections of additional federal program support beyond FY 1987 for Special Programs activities are minimal. Some added resources will be needed to cover uncontrollable expenses, such as necessary pay and inflation.

The Office of Folklife Programs will continue to plan and produce the annual Festival of American Folklife which takes place during the two-week period at the end of June and over the July 4th holiday weekend. Future exhibition plans include cooperation with the Directorate of International Activities in producing exhibits and complementary public programs within the International Center of the Quadrangle. The Office also plans to expand the educational use of its archives, which includes recordings of Festival performances, fieldwork interviews, and documentation of other Office projects and to expand its interaction with national and international scholars through periodic seminars, and publications.

Additional trust funds will be utilized for the activities of the Office of Fellowships and Grants, if they become available. Added support for fellowships and stipends are projected. Continued increases in trust funding will permit expansion of the program to include more senior post-doctoral fellows as well as increasing the overall number of awards offered. A highly successful visiting scientist and workshop program will be continued. Increases are also planned for the prestigious Regents Fellowships. These awards are offered to scholars of distinction to conduct in-residence studies of major importance.



Will Stutts performing in "Walt Whitman: Liberal and Lusty as Nature," part of the Living Portraits Series at the National Portrait Gallery. Photo by Barry Wilson.

As part of the effort to enhance minority participation in the life of the Institution, the Office of the Committee for A Wider Audience is developing a conceptual design to assist pan-institutional scholarly, educational and outreach staff to consistently attract and involve diverse racial and cultural audiences. Plans also call for providing expanding opportunities for minority students through internships and the Cooperative Education Program, and for increasing visiting appointments available to faculty members from minority academic institutions.

Within constrained growth levels, the Office of Elementary and Secondary Education will work to strengthen the Institution's role in providing workshops, publications, and various services to the local and national pre-college educational community in the United States. The National Science Resources Center, a recently undertaken Smithsonian Institution/National Academy of Sciences project directed at improving the quality of science education in the nation's elementary and secondary schools through the development of concepts and materials for teaching, will be well established by the end of the planning period if added resources, federal and trust, are forthcoming. The Office of Smithsonian Symposia and Seminars is involved in the Institution's observances of the 200th anniversary of the signing of the Constitution. A seminar is planned which will examine childhood experience as preparation for adult civic responsibilities. The Smithsonian's ninth international symposium will be devoted to the theme "Constitutional Roots, Rights, and Responsibility" in 1987. The Office will also contribute to a special colloquium being planned for the opening of the Quadrangle.

Equipment and moving costs for the Museum Support Center are expected to continue over the planning period; FY 1987 levels are being sought at about \$4,500,000; these are projected as peaking in FY 1989 at about \$6,500,000, and then declining to about \$1,000,000 by FY 1992. Significant federal increases for other special programs are not projected for FY 1988-92 except for Folklife Programs, the National Science Resources Center, and some minor increases for the International Environmental Research Program. Some growth in trust support for the Collections Acquisition, Scholarly Studies, Education, and the Special Exhibition program is projected; as is the case for other trust funded programs, this support is contingent in future years on economic conditions, institutional priorities, and the abilities of the various auxiliary and revenue producing activities to sustain their popularity and financial performances.



The Harmonizing Four, Reverend Donald Vails and The Salvation Corporation join together for the grand finale in a Tribute to Thomas A. Dorsey, part of the Classic Gospel Song Series at the National Museum of American History. Photo by Eric Long.

ASSOCIATES PROGRAMS

Founded in 1965 on the 200th birthday of James Smithson, the original Associate Program was designed especially for residents of the Washington metropolitan area, drawing on the varied resources of the Institution to provide educational and cultural opportunities to individuals or families who chose to join. The larger institutional aims in public education, however, have always been to make Smithsonian resources increasingly accessible to people of all ages and without regard to their geographic distance from the National Mall. With the establishment of the Smithsonian magazine in April 1970 as a major benefit and feature of a membership program, the original Smithsonian Associate Program has evolved now to include separate National and Resident organizations which offer educational and learning experiences geared to public constituencies in the Washington area, as well as across the country.

This chapter covers future plans, changes in activities, and resource estimates for Associates programs, including the National and Resident Associate Programs, the Office of Membership and Development which coordinates these Programs, and the Smithsonian magazine which is part of the Office of Public Service. The recently established Air and Space magazine is included in this chapter because of revenue producing and constituency development potential.

Current and Projected Resources

These trust-funded operations in FY 1986 have revenues totaling over \$88,100,000 and 215 employees. Minor amounts also are available from special purpose funds and restricted gifts and grants. As a group they generated \$10,000,000 in unrestricted trust income for the Institution in FY 1986 after cost of sales, payroll, and other operating expenses. Gross expenses for unrestricted trust Associate operations amounted to over \$78,000,000.

National and international study tours, lectures and seminars in Washington and across the U.S., and contributing membership activities are the ways through which the National Associate Program serves members without regard to their geographic location. The Resident Associate Program offers a variety of classes, lectures, tours, and other activities for members in the metropolitan Washington area. It has generally been self-supporting since 1972, generating modest net funds each year which are budgeted with unrestricted funds of the Institution. The fund raising and administrative costs of the Office of Membership and Development are considered an expense item against unrestricted funds. Contributions to the Smithsonian from corporations, foundations and individuals are expected to total over \$6,300,000 in FY 1986. This figure does not include the Contributing Membership Program, contributions from the members of the James Smithson Society, or contributions toward the Quadrangle project or other construction and renovation programs.

The Smithsonian magazine has been one of the most successful public education ventures established by the Institution. Its general acceptance

is a tribute to the role it has played in filling a need for style and elegance, as well as lucid reporting on cultural and scientific developments in today's world. The largest portion of the resources of this group of activities is attributable to the operations of the Smithsonian magazine.

Unrestricted income and expenses for FY 1986 and projected FY 1992 are summarized below:

	<u>FY 1986</u>		<u>Projected FY 1992</u>	
	<u>Full-Time Employment</u>	<u>Funds (\$000s)</u>	<u>FTE</u>	<u>Funds (\$000s)</u>
INCOME:				
Office of Membership and Development		-		-
Resident Associate Program		\$ 3,670		\$ 5,185
National Associate Program		15,760		25,975
Smithsonian Magazine		65,450		97,330
Air and Space Magazine		<u>3,250</u>		<u>13,550</u>
Total		\$88,130		\$142,040
EXPENSES:				
Office of Membership and Development	17	992	20	1,080
Resident Associate Program	50	3,570	56	4,970
National Associate Program	38	14,290	57	21,750
Smithsonian Magazine	89	54,135	91	81,800
Air and Space Magazine	<u>21</u>	<u>5,125</u>	<u>26</u>	<u>11,600</u>
Total	215	\$78,112	250	\$121,200
NET GAIN:		\$10,018		\$ 20,840

Future Year Prospectus

National Associate Program. The objectives of the Smithsonian National Associate Program (SNAP) will remain as they have been since 1970 -- to provide to Associates and the general public high quality, educational experiences in subjects relating to the Smithsonian and to encourage support for the Institution's work. The enthusiastic participation of its national constituency has enabled the Program to meet and advance its outreach goals and has made the Program's fundraising activities a significant source of revenue for the Institution's unrestricted funds.

Through lectures and seminars, the Program will continue to bring scientifically and culturally sound, yet popular, activities to cities and towns throughout the United States. In cosponsorship with local scientific and cultural organizations, SNAP will visit twenty-two cities

in FY 1987, providing learning opportunities for Associates and positive public relations for the Institution. Building upon past successes, the offerings will expand throughout the country. In Washington, D.C. the Program will offer at least fifteen major seminars each year to associates and the general public.

The Associates Travel program looks toward a future of offering outstanding educational travel opportunities to Associates. SNAP will work closely with Air and Space magazine staff to provide study tours which meet the needs of its members. The Washington 'Anytime' Weekend program is expected to remain a popular and inexpensive way for out-of-town Associates to sample the delights of the Institution.

SNAP's Contributing Membership program will begin FY 1987 with more than forty thousand members. Through new acquisition, maintenance, and upgrade strategies, this will increase to seventy-four thousand members in FY 1992. Unrestricted contributions in that year should exceed \$8 million dollars.

The next five years will see SNAP continue to automate its operations; beginning in FY 1987, SNAP will introduce the use of credit cards for selected programs. The Program anticipates settling into its new quarters in the Quadrangle beginning this fall.

Resident Associate Program (RAP). In FY 1986, almost two thousand activities attracted more than 270,000 persons. Over the planning period, RAP expects a ten percent increase in attendance. RAP will continue to bring to the Smithsonian outstanding scholars and leading experts in the arts, humanities and sciences. The performing arts segment will present renowned national and international performing artists. Discovery Theater, Washington's theater for young people, will build on its record setting FY 1986 season (with an attendance of over sixty-five thousand children and their families) and offer live dramatic, musical and puppet performances. Due to refurbishment of the quadrant of the Arts and Industries Building where the theater is located, its performances will move to the Baird Auditorium during part of FY 1987 and perhaps the first part of FY 1988. It should return to its home in the Arts and Industries Building during FY 1988.

In conjunction with major Smithsonian and national celebrations, RAP will organize special programs. For the observance of the Bicentennial of the Constitution in 1987, RAP is organizing a seminar, tour, course and lectures. Between now and 1992 RAP will present a wide variety of activities as part of the Columbian Quincentenary celebration. RAP will continue to offer a range of courses, lectures, seminars, films, and performances on international subjects by leading scholars and performers from foreign countries. In these activities RAP benefits from the assistance and cooperation of embassies, international organizations, and the Woodrow Wilson International Center for Scholars. Planned programs cover Australia, Canada, Turkey, and Morocco.

RAP membership in FY 1986 totalled more than 57,000 households, translating into approximately 132,000 individuals; the membership retention rate exceeded eighty percent. A recent increase in membership dues

and changes in parking privileges may affect the retention rate, but it is hoped that the current level can be maintained. To generate new members, RAP is increasing direct mail efforts and advertising. To reach new audiences, RAP will continue to work with the Institution's Committee for a Wider Audience, and to develop new programs such as the popular new series of lectures designed for Washington working singles. RAP will maintain its vigorous commitment to the community through the Scholarship Program for inner city young people and adults to attend RAP courses tuition-free; Discover Graphics, the free etching/lithography workshop series for area high school students and their teachers; Tuesday Mornings at the Smithsonian, the lecture/breakfast series for senior citizens; and the annual Kite Festival. Beginning in FY 1987 Discover Graphics will have a permanent home in a specially designed studio in the Arts and Industries Building.

Office of Membership and Development. In the face of increasing demand for private funds for Smithsonian programs, the Institution will significantly increase its development staff. Most of this increase will take place at the bureau level in order to encourage individual museums and offices to pursue support for their programs directly.

The central Office of Membership and Development will retain responsibility for pan-Institutional and multi-bureau projects, for research and record-keeping, and for assisting those bureaus without separate fundraising staff. The Office will continue to coordinate development activities across the Institution, in line with the new, more decentralized procedures. The Office will work with the new Development Committee, which is charged with setting development priorities and addressing other related issues. Growth in the Office should occur in the research staff.

The Office has detailed several staff members to the National Museum of African Art to conduct a capital campaign for that bureau which is expected to last about four years. In addition, the ongoing campaign for the expansion of facilities at the Cooper-Hewitt Museum is expected to be successfully completed over the planning period.

Smithsonian Magazine. Although the magazine's management is justifiably cautious about the ebb and flow of fashion in publishing, it also expects that the demand for its product will remain strong, with an annual financial surplus estimated at \$11,000,000 to \$16,000,000 over the next few years. It is primarily from these funds that the Board of Regents has been able to budget for the recently approved Regent's program for acquisitions, scholarly studies, educational outreach projects, and major exhibitions; to fund certain expenses previously met with federal appropriations; and to set aside sums each year for the enhancement of the Institution's endowment. The magazine will continue to produce a high quality product, supported entirely by the trust revenues which it generates. New growth in subscribers is expected to average 25,000 a year from the present level of about 2,300,000. If required because of inflationary cost increases associated with production and mailing, subscription rates may increase in future years.

Air and Space Magazine. The magazine explores the realm of human endeavor in flight and in exploration, science, and research within the atmosphere and beyond. Membership benefits, similar to those of the National Associates, are offered. As of September, three issues of the magazine have been published; the schedule calls for six a year. Operating losses are projected for the initial two years of publication over FY 1986-87 (amounting to about \$2.9 million); there are expected to be recovered sometime in FY 1990-91, after which the magazine is expected to produce a net gain of \$1 million or \$ 2 million a year.

With continued good performance by Associate Programs, revenues should increase from the current level of about \$88,000,000 to \$142,000,000 in FY 1992, with net income from these activities projected at approximately \$21,000,000. Detailed expense projections appear in Appendix I.

BUSINESS MANAGEMENT ACTIVITIES

This section covers plans, anticipated changes, and resource estimates for selected auxiliary activities conducted under the auspices of the Business Management Office. These revenue producing activities include the Museum Shops, Mail Order Division, Concessions, Parking, and Product Development and Licensing operations. The revenue producing activities of the Smithsonian magazine, Air and Space magazine, Smithsonian Press, and Traveling Exhibition Service are separate from the Business Management Office, and are presented in appropriate chapters and tables corresponding to the organization of the Institution and the FY 1988 budget submission.

The operations described in this section, like the Institution's Associate Programs, are an effort to offer the public a diverse range of services, to make the Smithsonian more accessible, and to enhance the educational experiences generated by exhibitions and other activities.

Current and Projected Resources

In FY 1986, these trust-funded operations had revenues totaling some \$41,000,000 and 315 employees. As a group they generated nearly \$7,400,000 in unrestricted net income for the Institution after cost of sales, payroll, and other operating expenses. By FY 1992, gross income from these activities is expected to increase by over \$18,300,000 with a net gain of approximately \$8,200,000 being made available for application to various activities and programs of the Institution.

	<u>Full-Time Employment</u>		<u>Unrestricted Funds</u>	
	<u>FY 1986</u>	<u>FY 1992</u>	<u>(\$000s)</u> <u>FY 1986</u>	<u>FY 1992</u>
INCOME:				
Business Management Ofc.			\$ 485	\$ 805
Museum Shops			19,030	26,700
Mail Order Division			19,210	29,100
Concessions			1,520	3,030
Parking			<u>1,060</u>	<u>-</u>
Total			\$41,305	\$59,635
EXPENSES:				
Business Management Ofc.	8	8	\$ 700	\$ 910
Museum Shops	215	260	16,780	24,100
Mail Order Division	75	102	15,510	24,100
Concessions	1	1	330	2,300
Parking	<u>16</u>	<u>-</u>	<u>595</u>	<u>-</u>
Total	315	371	\$33,915	\$51,410
NET GAIN			\$ 7,390	\$ 8,225

Business Management Office. In addition to the administration of the business activities listed below, this office is responsible for the product development and licensing program which makes reproductions and other products closely related to the Smithsonian collections available for purchase by individuals throughout the country, through licensing agreements with various manufacturers. Increased activity is projected.

Museum Shops. The Smithsonian has provided sales desks since the 1860s, but substantial sales results are a recent development. Centrally managed museum shops are located in the Museum of American History, the Museum of Natural History, the Arts and Industries Building, the Air and Space Museum, the Hirshhorn Museum and Sculpture Garden, the Museum of American Art, the Portrait Gallery, the Renwick Gallery, and the Museum of African Art in the Quadrangle beginning in FY 1987.

Items offered for sale in the museum shops are selected to meet special requirements. Each item must relate to the collections, be appropriate to the museum where sold, and conform to high standards of quality and taste. Catalogues and other publications derived from exhibition themes and subjects, including works by Smithsonian scholars, are important to the museum shops. Other items include reproductions of artifacts, craft products, and educational games and toys for children.

Mail Order Division. Formed in 1975, the Mail Order Division produces several catalogues each year. These catalogues are sent to Associates and offer special items selected to reflect Smithsonian collections and programs. High standards of quality, taste, and educational value are maintained. Over 300,000 catalogue orders are processed annually through the Division's receiving and shipping center in Springfield, Virginia.

Concessions. Through concession arrangements, the Institution provides visitors with restaurant facilities and recorded tour rental systems in the major Smithsonian museums. An old-fashioned ice cream parlor is also operated by a concessionaire in the Museum of American History. Other concessions include the popular carousel and popcorn wagons on the Mall during the spring and summer and the shop, restaurant, and parking facilities at the Zoo.

Parking. The majority of parking revenues were generated by the parking garage located under the Air and Space Museum. The lot was closed to the public in late FY 1986. The Institution's overall public parking program is being terminated and significant revenues are not expected for future years.

Future Year Prospects

Over the period from FY 1986 to FY 1992, the primary focus in the Business Management activities will be on improving the quality of goods and services offered to the public as well as the operational efficiency of the business activities. Expanded program activity will be associated primarily with the opening of new museum shop facilities in the Quadrangle replacing the existing shop of the National Museum of African Art; the

renovation and expansion of existing facilities in the National Museum of Natural History and the National Air and Space Museum; and increased efforts in product development and licensing. All plans are highly dependent on economic conditions and available resources. As in the past, high standards for the quality and value of goods and services will be maintained. Detailed projections appear in Appendix I.

ADMINISTRATIVE, FINANCIAL, AND OTHER SUPPORT SERVICES

Organization units described in this chapter include central management functions provided by the offices of the Secretary, Under Secretary, Assistant Secretary for Administration, General Counsel, Treasurer, Congressional Liaison, and Director of Facilities Services. They also include the following specialized administrative and technical offices: Accounting and Financial Planning, Audits and Investigations, Contracts, Equal Opportunity, Risk Management, Information Resource Management, Management Analysis, Personnel Administration, Printing and Photographic Services, Programming and Budget, Special Events, Supply Services, and Travel Services.

The facilities services offices are included under this chapter: Design and Construction; Plant Services; Protection, with primary orientation to the physical plant and its contents; Safety Programs which provide safety and health services to visitors and staff; and the staff services which provide architectural and historical research support on the Institution's buildings, along with collections management for the Castle Building and its collection of antique furnishings. To be consistent with budget presentations, resources associated with the Office of Horticulture, South Group Building Management, and Quadrangle Building Management are included in the tables of this chapter as part of physical plant services.

These central administrative, financial, technical and other support services provide overall planning, policy determination, direction, and leadership to the Institution; management of its resources; and evaluation of its work. These units furnish legal counsel; financial management; and other administrative, professional, and technical services required to support the Smithsonian's programs; to maintain, operate, and protect its physical plant; to perform health and safety services; and to assure that the Institution complies with all appropriate laws and regulations and is fully accountable for its actions.

Current and Projected Resources

These organization units had FY 1986 resources totaling about \$75,000,000 (including about \$16,000,000 for utility, communications, and rental costs) and 1,662 full-time employees. Of this total, approximately \$62,000,000 and 1,433 full-time employees are provided from appropriated funds and \$13,000,000 and 229 employees are allocated within the Institution's nonappropriated trust fund budget. A breakdown of resources (before application of overhead recovery) follows for FY 1986 and projected FY 1992.

<u>Subgroups</u>	<u>FY 1986</u>		<u>FY 1992</u>	
	<u>Funds</u>		<u>Funds</u>	
	<u>FTE</u>	<u>(\$000s)</u>	<u>FTE</u>	<u>(\$000s)</u>
Central Management Offices				
Federal S&E	35	\$ 1,683	38	\$ 1,969
Trust Funds	18	1,665	18	2,203
Specialized Administrative and Technical Offices				
Federal S&E	231	\$10,937	271	\$ 14,495
Trust Funds	188	8,804	192	12,013
Facilities Offices				
Federal S&E	1,167	\$49,575	1,364	68,889
Trust Funds	23	2,150	25	2,715
Total	<u>1,662</u>	<u>\$74,814</u>	<u>1,908</u>	<u>\$102,284</u>

Unrestricted trust funds are allotted to the management and support units to achieve an appropriate balance of federal appropriation and trust fund support in these units since they serve the entire Institution. These funds are used primarily for personnel who perform assignments similar to those of staff paid from appropriated funds. Several support units administer unrestricted trust funds for more specialized purposes. The Office of Printing and Photographic Services receives income from the sale of photographic materials to the public. The computer center of the Office of Information Resource Management and the audiovisual unit of the Office of Plant Services operate on a cost recovery basis by charging users for the services provided.

Future Year Prospectus

Projections of additional federal increases over the period are minimal and restricted to high priority needs; in addition some amounts will be needed to cover uncontrollable expenses such as necessary pay and inflation. The projections contain requirements for increases to institutional rent, utilities, and communications.

Major emphases of the administrative, financial, and other support offices over the planning period include safety programs, maintenance of the physical plant, improvements to financial and other management systems, continued strengthening of internal controls and accountability systems, and provision of adequate security and health systems.

The major facility event will be the opening in 1987 of the Quadrangle. Administrative, financial, and support costs associated with the units that will occupy the Quadrangle are contained in bases of the participating organizations and are aggregated in Table 5. The Institution will continue to maintain and upgrade its physical plant to guard against deterioration, to improve energy efficiency, to provide for health and safety requirements, and to assure that space assigned meets priority program needs. Additional details on the Smithsonian's capital

program appear in the Facilities Planning, Construction, Restoration and Renovation chapter and the Beyond FY 1992 chapter of the Prospectus.

The provision of timely and high quality services to Smithsonian bureaus and offices and to the public where appropriate will continue to be of primary importance over the planning period. To this end, data processing will be applied as widely as possible in a coordinated fashion to improve efficiencies, reduce the flow of paper, cope with higher workloads and provide more effective communications. Continued attention will be given to the assessment and correction of potentially vulnerable areas of operations. Such activity will be overseen by the Board of Regents and its Audit and Review Committee.

Serious deficiencies in the present levels of funding and staff for the maintenance of the physical plant and for support to building-related programs, such as exhibits installations, must be corrected. Security, safety, and health programs will receive increased attention. Guard and other security personnel will be added to meet the growing security needs of all facilities and to provide a more acceptable level of coverage in present public and other spaces for the protection of facilities, natural areas, collections, visitors, and staff. The Institution's proprietary alarm system, having been installed and tested in the Museum Support Center, is being extended to buildings on the Mall and elsewhere. Simultaneously, the program of upgrading alarm and other security equipment and devices will continue. The conversion and elimination of nitrate film materials from Smithsonian collections for safety reasons will be completed, as will the elimination or containment of such hazardous substances as asbestos or PCBs.

Operating budget resources required to meet these priority objectives and to sustain adequate levels of operational support by the organizations in the administrative, financial, and other support category may approach \$102,000,000 in FY 1992 from the FY 1986 level of \$75,000,000. Detailed projections for centralized, specialized and technical, and facilities offices appear in Appendix I.

FACILITIES PLANNING, CONSTRUCTION, RESTORATION AND RENOVATION

The Smithsonian's responsibility for its museum buildings and other facilities requires a continuing program of repairs and maintenance (some of which is accomplished by staff with funds provided in operating budgets), renovations and restorations, and new construction. The objectives of this program are to provide appropriate, safe, and accessible facilities for research, education, and care of collections. Federal appropriations are the primary source of funds for this work, but, starting with the funding of the original Smithsonian Institution Building, other sources of funds have at various times become available for particular projects. Improvement of facilities and their operation is one of the Institution's highest priorities, and reflects the Institution's great concern for the condition of its buildings, many of which date back to the turn of the century. Many millions of dollars are required each year for their maintenance and preservation, as well as to assure compliance with safety codes.

Considerable progress has been made in determining the extent to which additional facility support is required. A number of critical projects have been completed and a number of other major projects have been started. These projects include periodic work such as roof replacement, terrace resurfacing and waterproofing, replacing heating and air conditioning equipment, fire detection and suppression improvements, etc. Some \$130,100,000 of work can be accommodated within the current Renovation and Restoration projections for the Institution (excluding the Zoological Park) over FY 1988-92; this falls short of the currently identified requirement of \$200,000,000 to address the backlog of repair and restoration work on facilities.

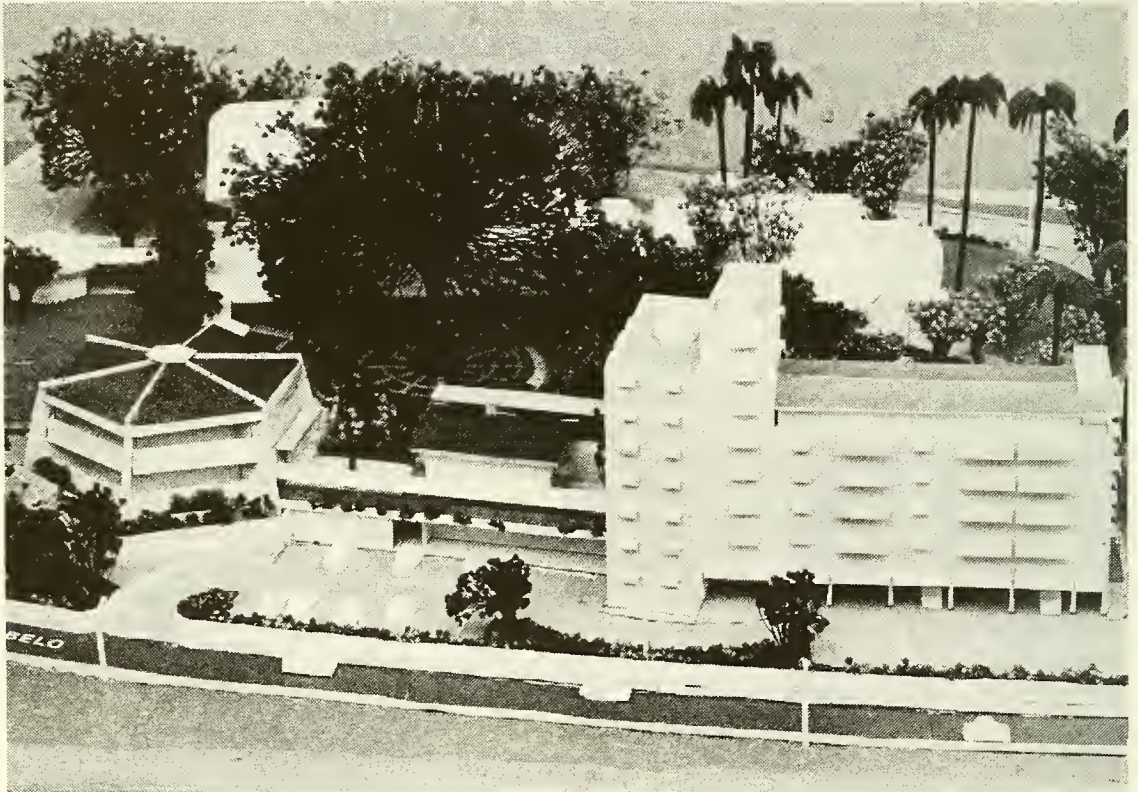
Redevelopment of the Zoological Park began in 1970, but several improvement and exhibition projects remain. About \$44,381,000 of work will be accomplished through FY 1987; about \$60,131,000 of work can be accommodated within the current budget projections for FY 1988-92 at Rock Creek and at the Conservation and Research Center at Front Royal in addition to ongoing repair requirements at both facilities.

In construction, highest priority is the completion of the Quadrangle construction for which final funding is anticipated in FY 1987. This chapter outlines new construction projects over FY 1988-92 for the Tropical Research Institute, the Whipple Observatory, Cooper-Hewitt, the Air and Space Museum, and Mall administrative support facilities. In addition, renovation of the General Post Office is described; design funds are to be sought in FY 1989, with construction proposed for FY 1993.

Construction

Science Facilities Development

Legislation was recently passed by Congress authorizing planning and construction for development of research facilities at the Fred L. Whipple



Model of the proposed Earl S. Tupper Research and Conference Center to be built at the Smithsonian Tropical Research Institute.

Observatory in Arizona and the Tropical Research Institute in Panama. The Smithsonian's current research objectives include a coordinated effort to improve science facilities commensurate with the Institution's longer range scientific expectations. A description of the construction projects at these locations follows:

Tropical Research Institute

The Smithsonian Tropical Research Institute (STRI), located in the Republic of Panama, is the principal U.S. center for tropical biology. Each year hundreds of U.S. and international researchers join the permanent STRI staff in undertaking fundamental studies on the tropics. Increasingly scientists and policymakers have recognized the need to understand how tropical ecosystems function in order to predict more accurately environmental changes in the temperate zones.

To capitalize on STRI's unparalleled data base of more than sixty years, and to improve existing deficiencies to the physical plant, it is necessary to undertake the facilities improvements outlined below. A Master Plan was completed recently by a major architectural/engineering firm to assist in guiding this program.

Existing STRI facilities include buildings constructed in the 1920s and 1930s and renovated structures obtained from the U.S. military and other agencies. With the exception of a new library building opened in 1984, these facilities are inadequate because of age, size, safety, and health standards. Construction materials used in the first half of the century are inappropriate to the region's high humidity and insect infestation, and renovation of surplus buildings has served only as a stop-gap measure to ensure continuity of research. The structures are inadequate for modern scientific purposes and require extensive maintenance.

The most pressing need for STRI is a new terrestrial laboratory to replace a small and obsolete leased structure at Ancon. Originally built as a hospital morgue, the facility does not adequately support current research purposes. It has severe deficiencies in its electrical systems, plumbing, load-bearing capacity, and parking. Furthermore, its hillside location makes extensive renovation and the addition of outdoor cages and plant-growing facilities impossible.

With Federal funds of \$3,500,000 anticipated in FY 1987 and a gift of \$4,000,000 received from the family of the late Earl S. Tupper, a new laboratory will be built at the headquarters site. This new terrestrial laboratory will allow proper space utilization for permanent staff, long-term visitors, and students. Better integration of computers, other communications devices, and modern scientific equipment will be afforded in the new facility, as will space for cages, greenhouses, lectures, small meetings, and major conferences. Ground breaking is expected during the winter of 1987.

Barro Colorado Island, located in the middle of Gatun Lake, a key component of the Panama Canal, has served as an important research center for tropical biology since 1923. Under the Canal treaties, STRI was

assigned custodianship of the 12,000 acre Barro Colorado Island Nature Monument on behalf of the U.S. and the Republic of Panama. The island, at the center of the reserve, serves hundreds of investigators annually, providing research space as well as living and dining accommodations. Its physical plant includes many outdated wooden buildings which do not meet modern day building or health codes. Using Restoration and Renovation monies in FY 1988, the Smithsonian will be making some improvements to the basic electrical, water, and sewage systems. The major requirement now is a new scientific laboratory with attendant cages and growing facilities. The FY 1988 budget request includes an amount of \$2,800,000 for design and construction of new laboratory facilities at Barro Colorado Island.

The geographical advantages of Panama to researchers interested in marine studies are incomparable: nowhere else in the world are two oceans so easily accessible for comparative research. Currently, renovated facilities are available on the Pacific, but no similar situation exists on the Atlantic. STRI research there is conducted at Galeta Point in a small aluminum building acquired as surplus property from the U.S. Navy in 1965. The present laboratory has a severe asbestos problem in its walls and roof. Housing for researchers consists of a dilapidated trailer which does not meet safety and health codes; and an inadequate sewage disposal system threatens the unique coral reef/mangrove swamp study site. A new laboratory, dormitory, and sewage system located at Galeta or a more appropriate Atlantic site will be required. It is expected that an amount of \$3,500,000 will be requested in FY 1989 to design and construct these facilities.

STRI is responsible for more than sixty vehicles, a major research vessel, and dozens of small boats, in addition to normal building maintenance. At present the maintenance needs of its geographically dispersed facilities are performed in the bottom of an old torpedo factory; the top floor houses research offices. In order to provide for adequate maintenance, to relieve the noise and congestion of the present site, and to increase physical proximity to suppliers, as well as to buildings and equipment to be repaired, a new central facility with modern equipment is required. Design and construction of a new workshop and maintenance facility is estimated at \$900,000, and the Smithsonian plans to seek this amount in FY 1989.

Whipple Observatory

Development of base camp facilities at the Whipple Observatory near Tucson, Arizona is required to support expanded research activities associated with the installation of the Multiple Mirror Telescope. The Observatory is located on a 4,744-acre site on Mount Hopkins which is controlled by the U.S. Forest Service and reached by a limited-access road that originates at the observatory administrative headquarters location in Amado, Arizona.

The present administrative and support facilities of the Observatory, which serve all mountain-top activities, are located in an office and maintenance complex west of the Santa Cruz River, 18 miles from the scientific operations on Mount Hopkins. This base camp is the operational and logistical headquarters for anyone working at or visiting the

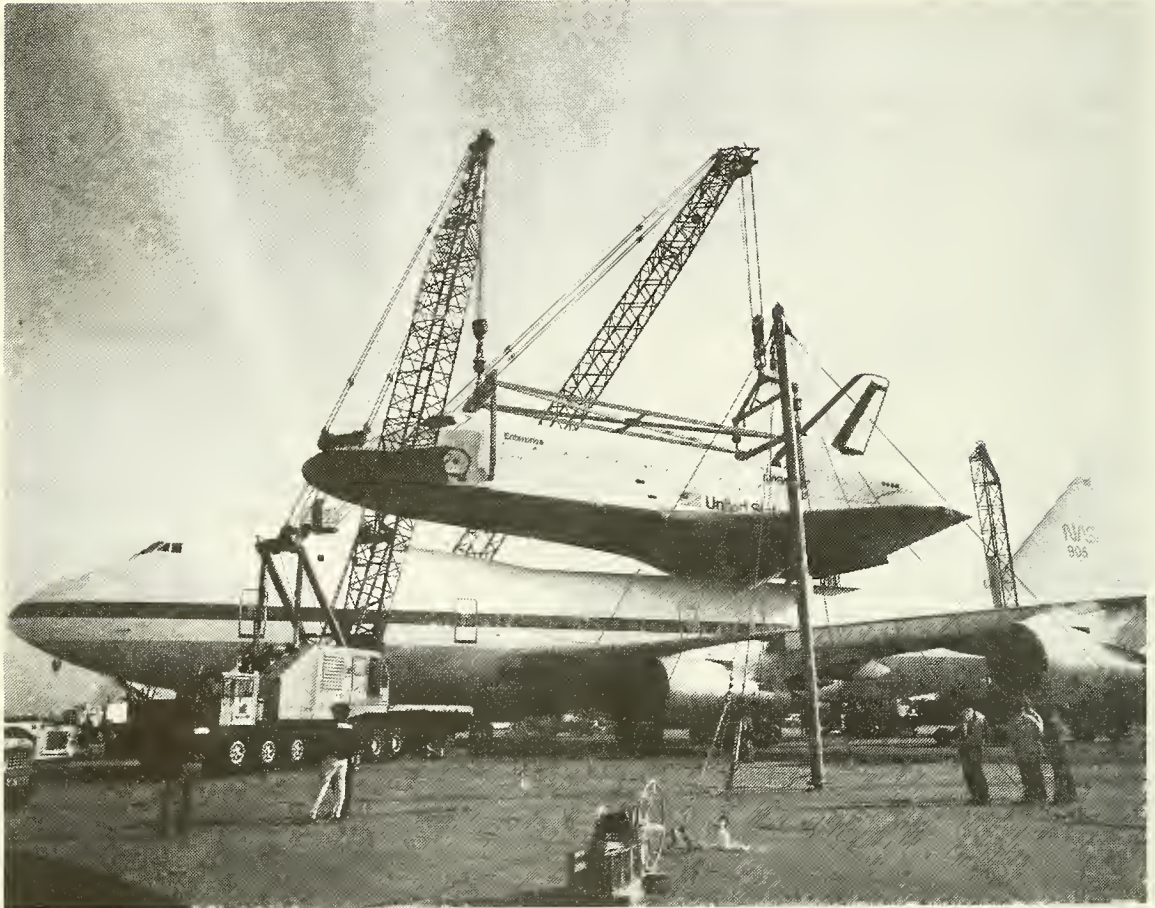
mountain. Its site consists of two adjacent leased parcels of land totalling approximately 4.25 acres; its facilities include a one-level school building and a one-level residence which have been converted for office use. There are also vehicle service, repair, and storage sheds on the site.

The owner of one of the two presently leased parcels has indicated a desire to sell the property in the near future. The site was the primary focus of P.L.98-73, approved August 11, 1983, which authorized appropriations of \$150,000 for the Institution to purchase land in Santa Cruz County, Arizona for a base camp. Almost immediately after enactment of the measure it became clear that the purchase price of the property would exceed the authorization. More significant, however, were the rains that fell in October 1983 and the immensely destructive flooding of the normally dry river that ensued. The bridge between the base camp and the mountain facilities was washed out, making access very difficult and adding two hours to the already arduous round trip to and from the summit. In view of these circumstances, the Smithsonian is no longer a prospective buyer of the existing parcels.

Recently the Smithsonian completed the first phase of a master planning process to locate a more appropriate site for a base camp and to make efficient use of the space available. After a thorough review the Institution has selected as its first choice a site under the control of the Forest Service, closer to the mountain than the existing one, and east of the Santa Cruz River. An environmental analysis of the potential sites has been completed for the U.S. Forest Service and is awaiting public comment in the fall of 1986.

The second and final phase of the master planning process includes spatial analyses of the site, plans for its development, related environmental documentation, and refined estimates of the cost. Two alternative sites under the control of the State of Arizona are in the same general area; they will be investigated as back-up sites in case the Forest Service land proves to be unavailable.

The Institution is requesting \$4,500,000 in FY 1988 for design and construction of a new base camp for the Observatory. The proposed base camp will consist of administrative offices and a visitor center, a motor pool and warehouse facility. Administrative office space will provide for purchasing, fiscal, engineering, secretarial, and public information activities. A small visitor center will offer displays and briefings about the activities being conducted at the Observatory. The motor pool facility will support more than 60 vehicles, including buses and heavy machinery used for road maintenance. Enclosed motor maintenance shops are required because of weather extremes, and space is needed for spare parts storage. A warehouse is also required for the secure storage of goods and equipment going to and from the Observatory. Appropriate paving will be required for access to the site; i.e., pedestrian walkways, driveways, and parking and motor pool areas.



In 1985, the National Air and Space Museum acquired the Space Shuttle Enterprise as part of its growing collection of large aircraft and spacecraft. This acquisition emphasized the need for a museum extension at Dulles International Airport to accommodate not only the many large artifacts, but to provide an additional outlet for the crowds visiting the downtown museum.

Cooper-Hewitt

The Institution is planning new construction to make maximum use of the land and space available for Cooper-Hewitt operations. A new wing would be constructed and the Miller townhouse renovated. This would add substantially to the Museum's capabilities for special changing exhibitions and educational programs, and allow the Carnegie Mansion to house the Museum's permanent collections and exhibitions. A fund-raising effort is beginning with a goal of about \$12,500,000, representing one-half the requirement. Legislation authorizing construction and Federal funding of \$12,500,000 is pending; the Institution now plans to seek those funds in FY 1990.

Air and Space Museum

Because of the size of air and space craft, it is uneconomical to provide collection storage space in the Mall building. Therefore, the Air and Space Museum has used temporary metal storage buildings at a 21 acre site at Suitland, Maryland acquired by the Institution for this purpose in the mid 1950s. Periodically since acquiring this facility, additional metal buildings have been constructed to a point now where both they and the site are filled to near capacity. Also, over the years, the Suitland area has been developed intensely, making transportation of large modern aircraft to the Air and Space facility, now known as the Paul E. Garber Facility, extremely difficult.

Over the past five years staff of the Air and Space Museum have evaluated potential locations at or near airports in the Washington region that could accommodate storage and exhibition structures to permit relocation of aircraft from the Garber Facility and receive by air transportation new objects such as the recently acquired space shuttle Enterprise and a promised Concorde. This search resulted in the selection by the Museum of Washington Dulles International Airport in Virginia. Preliminary and informal discussions with the Federal Aviation Administration indicate that sufficient underdeveloped acreage and general interest exists to warrant serious consideration of this location and further study and planning.

Congressional members of the Board of Regents have introduced legislation authorizing planning and construction of the proposed facility. Amendments to the legislation authorize \$1,000,000 for master planning but prohibit the use of Federal funds for construction.

General Post Office

Since 1958, when the Institution acquired the Patent Office building, it has been interested in obtaining the General Post Office building, which is immediately across F Street. Both buildings are the work of America's first native-born professional architect, Robert Mills of South Carolina, who also designed the Washington Monument and the Treasury building. The General Post Office (the fifth oldest Federal building in Washington, D.C.) is proposed to be used for expanded public activities of the National Museum of American Art, the National Portrait Gallery, and the Archives of American Art now housed in the Patent Office building.

These landmark structures, connected by a tunnel under F Street, are expected to meet the needs of the three bureaus well into the next century.

Legislation has been enacted authorizing the transfer of the building to the Smithsonian without reimbursement, contingent on GSA securing suitable quality space for the relocation of the current occupant, the U.S. International Trade Commission. This relocation is scheduled for early FY 1988.

Preserving this historic landmark and converting it to public purposes will require a comprehensive program that must meet the special requirements of museums for fire protection and climate control in order to preserve the collections with which they are entrusted, while also providing for the safety and accommodation of visitors. A specific program is being developed for the use of the building. It is expected that an amount of \$3,000,000 will be sought in the FY 1989 budget for design, and \$37,000,00 will be sought for construction in FY 1993.

Administrative Service Center

The present concept of an in-town Smithsonian Service Center was developed in 1975 when a number of Institution support activities located at various leased buildings in Washington were consolidated in a single leased location at 1111 North Capitol Street to provide efficient support to museums and other bureaus located principally on the Mall. The current lease expires in the fall of 1992. During the term of the lease, the building was sold to a development firm. In discussions with principals of the firm, it has been made clear to Institution representatives that the objectives of the current owners include redevelopment of the property to a higher and better use.

Smithsonian plans call for constructing a replacement building for those activities now at 1111 North Capitol Street together with other central support activities now on the Mall which are expected to outgrow their present space or whose space may be required for museum programs. Presently, it is estimated that a Service Center of 250,000 gross square feet will be required at an estimated cost of \$30,200,000 for site acquisition, design, and construction. It is expected that funding may be requested for this project in FY 1992.

Construction Planning

An essential part of an effective facilities development program is the ability to assess major requirements and make long range plans in sufficient detail so that an accurate scope can be developed, estimates made of costs of construction and operation, and issues affecting the project identified and addressed before approval is sought from Congressional committees and review commissions.

An estimated amount of \$1,350,000 will be requested annually beginning in FY 1988 to support planning and conceptual study upon which to base precise scopes of work and construction estimates; establish operating and logistical support requirements; and make environmental

impact assessments for projects included in this Prospectus. The funds will also permit identification and preliminary planning of projects beyond the five year period in order to develop a more definitive long range facilities development program.

Restoration and Renovation

The Restoration and Renovation of Buildings (R&R) account is used to fund building repairs, alterations, and improvements to Smithsonian facilities. Substantial annual funding is required in order to assure preservation and effective operation of the Institution's buildings; to provide a safe environment for visitors, staff, and collections; and to meet program objectives.

The Institution's buildings and facilities (other than the Zoo) consist of fourteen museums and galleries, including the Quadrangle now under construction, in Washington, D.C. and New York City housing research and collections management activities and a wide range of exhibitions in the fields of science, history, technology, and art. Also included are facilities at Suitland, Maryland, for the preservation and storage of collections, and display of air and spacecraft; centers for biological research, conservation, and education in Panama and on the Chesapeake Bay; and a center for astrophysics in Cambridge, Massachusetts and the Whipple Observatory on Mt. Hopkins near Tucson, Arizona.

A backlog in excess of \$200,000,000 currently exists of identified essential repair and restoration projects required to keep the Smithsonian's buildings in good operational condition and to meet all safety and environmental codes. The emphasis throughout the planning period will be on implementing a planned program to identify more fully the present and future requirements of the Institution's buildings and to eliminate this backlog over time. A number of major problems need to be addressed, including replacement of aging and outmoded heating, ventilation and air conditioning plants, ranging in estimated cost from \$11,00,000 to \$56,000,000; installation of fire detection and suppression systems required to meet current codes, estimated in excess of \$20,000,000; and removal of containment of such dangerous substances as asbestos and PCBs, at an estimated total cost of over \$10,000,000; and replacement of deteriorated plazas estimated at more than \$3,000,000 each.

Although funding for Restoration and Renovation projects has increased from several million dollars in the early 1970s to almost \$13,000,000 in FY 1987, this level of annual funding is not sufficient to allow a significant gain on the backlog of requirements. Although most major projects need to be phased in order not to disrupt ongoing Smithsonian programs and activities, protracted phasing of projects just to accommodate the work within funding limitations significantly increases project costs over a number of years because of inflation and increased management requirements. The amounts projected in the Prospectus represent an attempt to bring this funding level closer to that required to resolve a number of urgent needs of the physical plant.

The following major projects are planned with the FY 1987 appropriation of \$12,828,000: completion of roof and facade repairs at the

Arts and Industries building; continued implementation of the fire protection master plans for the Natural History building and the American History building; continued removal or encapsulation of asbestos located in several Smithsonian buildings; continued implementation of heating, ventilating and air conditioning and energy conservation improvements in the American History building and implementation of an energy conservation plan at the Natural History building; the initiation of a project to eliminate PCB filled transformers from Smithsonian buildings as required by a 1985 EPA regulation; installation of a master raceway for communications systems between the Mall museums; and creation of additional storage space beneath the courtyard of the Freer Gallery of Art.

The FY 1988 R&R appropriation request of \$19,114,000 will allow continuation of these and other presently known work requirements. The Institution is currently reviewing specific projects for scheduling in future years to meet the most urgent requirements of the physical plant. Categories of project work are described in the following paragraphs.

General Repairs and Improvements. These projects do not lend themselves to discrete categorization, or are minor emergency repairs, such as equipment failures or structural defects that cannot be anticipated and that arise from heavy visitor use, extreme weather conditions, or other circumstances. Examples of projects in this category are interior repairs to floors, ceilings, partitions, doors and building hardware; repairs to roads, walkways and docks; and elevator and escalator repairs.

Facade, Roof and Terrace Repairs. Maintaining the integrity of the exteriors of all Smithsonian buildings is critical to preventing major structural damage and deterioration due to age and weathering, and to ensuring a safe environment for visitors, staff, and collections. Energy conservation also demands weather tight exteriors. Work in this category includes a variety of major projects, such as roof replacement, repointing and recaulking facades, plaza resurfacing, exterior painting, and window repairs.

Work is continuing on the renovation of the exterior the Arts and Industries building. Completion of the roof replacement, repointing of the masonry facade, extensive window replacement, and replacement of gutters and downspouts is expected in late 1987. Funds of \$10,400,000 appropriated from FY 1981 through FY 1986, and the amount of \$2,500,000 anticipated in FY 1987 are being used to continue exterior restoration on a Building quadrant-by-quadrant basis.

Work is complete on the renovation of the facade of the 120 year old Renwick Gallery building. The Institution received approval from the Commission of Fine Arts and the Joint Committee on Landmarks for the use of precast concrete in lieu of natural stone to assure that the repairs will provide a permanent solution to the problem while maintaining sensitivity to the building's status as a National Historic Landmark. The amount of \$5,950,000 appropriated through FY 1985 was used to complete this project.

Additional projects for the next few years include replacement of terraces at the Air and Space Museum and the Hirshhorn Museum; facade repairs at the Air and Space Museum; roof repairs at the Renwick Gallery, Natural History Museum, the Carnegie Mansion and at the Tropical Research Institute; and facade repairs and window replacement at the Smithsonian Institution building.

Fire Detection and Suppression System. The Institution is continuing to develop and implement plans for upgrading fire protection systems in all buildings in order to provide a level of safety consistent with today's standards and technology. Work in this category includes such items as the installation of heat and smoke detection systems, sprinkler and chemical suppression systems, and fire doors and walls. Improved systems are installed as exhibitions are changed, and fire retardant materials are used wherever possible.

The implementation of comprehensive fire protection master plans is in progress at both the Museum of Natural History, the Museum of American History and the Air and Space Museum. Construction includes the installation of upgraded sprinkler systems, new smoke detection systems, fire pumps, generators and control panels, and architectural modifications to create more efficient fire zones. Fire protection projects planned for the next five years include the installation of fire zones and additional sprinklers in the Smithsonian Institution building, the Hirshhorn Museum and the American Art and Portrait Gallery building.

Access for the Disabled, Safety and Security, and Correction of Hazardous Conditions. Substantial progress has been achieved in eliminating architectural barriers at Smithsonian buildings. Several Smithsonian facilities still require additional modifications to meet recently updated standards for disabled person access. These projects are scheduled to be accomplished during this planning period.

The elimination of exposed asbestos insulation located in several buildings continues to be a high priority and funding will continue to be required for the correction of this problem through the planning period.

Other projects planned include replacement of tile in the Great Hall of the American Art and Portrait Gallery building; entrance modifications at the Natural History Museum; entrance grate and emergency door replacement at the Air and Space Museum; modification for disabled access at the American History building; and security lighting on the Mall.

Utility Systems Repairs and Improvements. Funds appropriated in this category are used to maintain, repair and upgrade the heating, ventilating and air conditioning systems (HVAC) and other building support systems in the Institution's facilities.

The heating, ventilating and air conditioning systems in a number of Smithsonian buildings have exceeded or are approaching the end of their useful lives based on industry standards and are not capable of providing the environmental conditions required in museum buildings in an energy efficient manner. Major overhaul or replacement of these systems will be required over the next few years in order to ensure continued reliability

of operation and to improve efficiency. The most critical areas of concern are the Museums of Natural History and American History, and the Arts and Industries and American Art and Portrait Gallery buildings. HVAC and related energy conservation improvements also are required at the Hirshhorn, the Renwick Gallery, the Cooper-Hewitt Museum, and the Air and Space Museum, and a utility system study and energy audit will be conducted and implemented at the Smithsonian building.

In response to the increasing need for automation of Smithsonian offices and for access to data base management systems, as well as projected uses in the near future of additional computer and electronic services for research, collections management, education, and exhibition purposes, the Institution has developed a plan to interconnect the systems through a common communications pathway or master raceway system. Installation of such an interconnecting system will significantly reduce the costs of independently connecting individual systems as they are needed for various purposes, and will also provide a higher degree of interaction among the different kinds of systems, including data and word processing, collections management and research systems, sensing systems for energy management, an expanded telephone system, telexes and facsimile machines, and video systems for exhibits and educational purposes. The Institution received \$250,000 in FY 1986 and anticipates \$160,000 in FY 1987 to begin installing a raceway system within and between eight buildings in the Mall area which will accommodate electronic requirements anticipated over the next ten years. The amount of \$1,500,000 requested in FY 1988 will be used to install raceways and cabling within the Museum of Natural History. Additional amounts are expected to be sought through FY 1992 in order to extend the raceway into each of the eight buildings and to work stations, offices or exhibit areas.

A July 1985 regulation issued by the Environmental Protection Agency requires replacement of all high-voltage electrical transformers containing cancer causing chemicals known as PCBs by the year 1990. The Institution has fifty-nine of these transformers in various buildings and all but two transformers will be replaced with an amount of \$3,600,000 requested in FY 1987 and FY 1988. The two remaining transformers, which because of their age and inaccessible location in the Air and Space Museum would be difficult and costly to replace, are being drained and flushed to remove the PCB liquid and refilled with a non-harmful liquid. At the end of this "retrofilling" process the PCB content of these transformers will have been reduced to a level that under new EPA regulations will no longer classify them as PCB transformers.

Other Projects: Included in this category are space modifications and renovations to accommodate changing program requirements, sometimes in conjunction with other construction activities that offer improved office and collections storage space conditions. Renovations are projected during the planning period at the Museum of American History, the Museum of Natural History, and the Arts and Industries and Smithsonian buildings, to take advantage of additional space available for program use by reduction of space needed for utility and mechanical systems and the expansion of program activities into new facilities such as the Museum Support Center and the Quadrangle. Also included in this category are projects at Suitland to modify metal storage buildings for collections

management purposes; construction of a dormitory at the Whipple Observatory, an instrument shop at the Environmental Research Center on the Chesapeake Bay, and a new road and docking facilities at the Tropical Research Institute in Panama. Advanced planning funds will be requested to enable the Smithsonian to prepare better cost estimates for future renovation and restoration projects and to reduce the effects of inflation on construction costs by providing design capability for major projects prior to receipt of project construction appropriations. A combined master plan for all Smithsonian facilities will identify and analyze present and future facility requirements and will assist in the development of a comprehensive long range plan to meet these needs.

TABLE 3

SMITHSONIAN INSTITUTION FIVE-YEAR CONSTRUCTION AND RESTORATION AND RENOVATION PROJECTIONS *
FY 1988 - FY 1992

<u>CONSTRUCTION</u> (\$000)	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992
Quadrangle **	\$ 6,630					
Science Facilities Development ^{1/}						
Smithsonian Tropical Research Institute	7,500 ^{2/}	\$ 2,800	\$ 4,400			
Fred L. Whipple Observatory		4,500				
General Post Office ^{3/}			3,000			
National Air and Space Museum/Dulles ^{4/}				\$ 2,400	\$ 29,600	
Cooper-Hewitt ^{5/}				25,000		
Administrative Service Center ^{6/}						\$ 30,200
Construction Planning		<u>1,350</u>	<u>1,350</u>	<u>1,350</u>	<u>1,350</u>	<u>1,350</u>
CONSTRUCTION TOTAL	\$14,130	\$ 8,650	\$ 8,750	\$ 28,750	\$ 30,950	\$ 31,550
<u>RESTORATION AND RENOVATION</u>	\$12,828	\$19,114	\$24,000	\$26,000	\$29,000	\$32,000

* Exclusive of National Zoological Park. Also not included are projections for trust funded restaurant or museum shop facilities.

** Includes \$4,000,000 contained in pending FY 1987 federal request to cover construction contingencies and claims and construct tunnel link to the Freer Gallery of Art; \$2,630,000 in trust funds will be used to round out total funding required.

- 1/ Legislation authorizing the planning and construction of expanded Science facilities, which would include base camp construction at Amado, and a major laboratory building at the Tivoli site as well as improvements at other STRI facilities in Panama has been passed. A number of related minor projects will be accomplished using R&R funds.
- 2/ Construction of a laboratory and conference center at the Tivoli site will be funded partially by Federal funds (\$3,500,000) and partially by a private contribution (\$4,000,000).
- 3/ A planning and construction authorization bill was obtained in FY 1984. The \$3,000,000 to be requested in FY 1989 is for design of the planned renovation. It is currently anticipated that construction costs (estimated at \$37,000,000) would be requested in FY 1993.
- 4/ Legislation is pending authorizing appropriation in FY 1987 or FY 1988 of \$1,000,000 for the master planning of the facility at Washington Dulles International Airport. The legislation contemplates the use of non-Federal funds for construction.
- 5/ The Institution is seeking authorization for a proposed facility expansion project, presently estimated at approximately \$25,000,000 to be funded with equal parts federal and trust funds.
- 6/ A facility to replace the leased North Capitol Street administrative service center. The amount of \$30,200,000 estimated is for site acquisition, planning and construction.



Workman lays hexagonal pavers along Olmsted Walk, the main pedestrian path through the National Zoo. The renovation of this walk should be complete by 1989, in time for the Zoo's centennial. Photo by Jessie Cohen.



Young visitors play along newly-renovated Olmsted Walk. The "climbable" sculpture is set on paving material that reduces the risk of injury from falls. Photo by Jessie Cohen.

Zoological Park and Conservation Research Center

This account is used at the National Zoological Park for repairs, alterations and improvements to the plant property, and for the construction of additions and minor new facilities including exhibits; to prepare plans and specifications for construction; and to perform renovations, restorations and new construction for implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973. The Zoo's facilities include 163 acres in the Rock Creek Valley of Washington, D.C., and a 3,150 acre Conservation and Research Center located in Front Royal, Virginia.

The Zoo has developed a five-year construction and improvement schedule for both the Rock Creek facility and the Conservation Center at Front Royal. The following paragraphs outline the projects anticipated over the planning period.

Zoological Park Redevelopment

Research Facility - With the construction of the new hospital facility at Rock Creek, the existing health and research facility will be renovated to house all research functions of the National Zoo. The renovation will correct several structural and mechanical deficiencies and will provide the Zoo with a first rate research facility including five environmentally controlled animal holding rooms; animal support areas; research support areas and staff offices. Renovation of the research facility is estimated to cost \$3,000,000.

Olmsted Walk - Restoration and construction of the Olmsted Walk was started in FY 1985 with emphasis given to preserving and enhancing the natural and historical character of the Park. Some exhibits along the Walk will be renovated to enhance the visitor's experience in viewing the animals. New surfacing materials for the Walk, adequate drainage, new landscaping, additional benches and drinking fountains, and improved graphics will be provided. These efforts will assist in unifying the exhibits and grounds and in providing a pleasant and educational experience at the National Zoo.

The first phase concentrated on the section of Olmsted Walk from the Rock Creek entry up to the Great Ape Facility. This phase established an identifiable pedestrian entrance at the Rock Creek side of the Zoo, providing visitors a proper orientation point at the beginning of their visits. The main walkway was modified to loop around in front of the reptile and monkey houses by constructing a winding walkway more in line with the spirit of the original Olmsted design. This section of the Olmsted Walk reopened to the public in April 1986. A new Gibbon Facility is being constructed and is scheduled to open in May 1987.

The second phase will renovate the opposite end of the Olmsted Walk beginning on Connecticut Avenue. At the entrance to the education building, a plaza will be created which will include an information kiosk. Walkways adjacent to the existing sable antelope, bongo, and dorcass

gazelle exhibits will be modified to provide access to the plaza. This phase is scheduled to be completed in the spring of 1987.

The final phase will modify the Walk from just past the education building to the Great Ape Facility. The Walk in this area will be renovated to provide the visitor with a better view of the surrounding exhibits. A third entry point to the Walk will be constructed in this phase. The amount of \$3,271,000 is included in the FY 1988 budget request to complete this project.

Aquatic Exhibits - Unlike the aquarium in Baltimore, the proposed aquatic habitat facility will include not only fishes but the full range of aquatic animals such as aquatic mammals, birds, reptiles and amphibians. Another essential difference is that the NZP will concentrate on freshwater animals while Baltimore concentrates on animals found in the marine ecosystem. Hence, the two facilities will be complementary rather than duplicative. Together with the invertebrate exhibit slated to open in late 1986, the proposed aquatic habitat facility fills the last gap in the Zoo's presentation to the public of representatives of all the major animal groups. To date emphasis has been placed almost exclusively on terrestrial animals in our natural world despite the fact that over sixty percent of the world's vertebrate animals are fishes. The animals proposed for exhibition will include those not heretofore exhibited in most zoos. The world of aquatic animals is little known to the public; hence the proposed exhibit provides an excellent opportunity to educate and entertain the general public on these engaging and important groups of animals.

The first phase, estimated at \$7,000,000 will incorporate a tropical forest and stream displaying aquatic mammals with appropriate fish, invertebrates, birds and amphibians, as well as vegetation. An amount of \$13,000,000 is estimated to complete the design and construction of the facility; prospects for raising private funds in lieu of appropriations are under review.

General Services and Parking Facility - Additional Zoo redevelopment savings are anticipated by reducing the scope of the second phase of construction of the General Services and Parking Facility; \$1,500,000 will be sought for design and cost estimate. The present estimate for construction is approximately \$16,000,000; this estimate will be updated and construction funds of \$12,000,000 sought at a later date. The Institution plans to offset some construction expenses by using parking revenues held in trust; these are expected to amount to approximately \$4,000,000 by FY 1990.

For over a decade the Institution has recognized the requirement for a centralized parking facility at Rock Creek. Such a facility would allow the return of several surface parking areas to animal exhibition spaces and also increase green space around the central exhibition area of the Park. The areas freed of present use as car parks are the only flat areas remaining at the Park for exhibit use. The proposed parking garage would include approximately 1,100 spaces compared to the existing 250 spaces on the site contiguous to the present General Services Building. A

pedestrian walk and tunnel would be constructed to allow visitors unimpeded access to the central Zoo animal area.

Grasslands and Forests Exhibits - These new exhibits are proposed for development during the coming decade. The exhibits are eco-geographic in their character and for planning purposes are broken into three distinct zones: American Grasslands, African Grasslands, and Forests. Total estimated cost for the exhibits is \$16,500,000.

The American Grasslands exhibit will be located in what is now Visiting Parking Lot B. The exhibit will be subdivided into the major habitats, the North American Prairies and the South American Grassland. The two exhibits will be separated by a planted berm which will conceal the service yard and holding buildings from the two exhibits. Species planned for the Prairie exhibit include bison, coyote, sandhill crane, prairie dog and gopher snake. Species scheduled for the Grassland exhibit include mara, giant anteater, capybara, maned wolf, rhea and guanaco.

The African Grassland exhibit will also be subdivided into two major habitats, the African Savannah Grassland and the African Desert Grassland. The exhibits will be located where the Hardy Hoofed Stock exhibits and bus staging area now exist. The trails in the two subdivisions will include screening and specimen plantings to create the illusion of being in Africa. Animal species such as zebra, ostrich, wildebeest, flamingo, spotted hyena, blesbok, gerenuk and dwarf mongoose. A nocturnal exhibit will include species such as gorilla, aardvark, fennec fox, cobra, and insects. Species planned for the desert exhibit include gazelle, crowned crane, meerkat, duiker, and klipspringer.

The Forest exhibit will be located on the hilly terrain east of the Connecticut Avenue entrance to the Zoo. The exhibit will be subdivided into three major habitats: West African Forest, Southeast Asia Forest, and the Sulawesi Forest. Species planned for the exhibits include mandrill, leopard, bongo, Eld's deer, tapir, muntjac, anoa and babirusa.

Renovation and Repairs - In addition to the redevelopment Master Plan, the Zoological Park is responsible for a continuing program of major maintenance and repair of its real property (buildings, grounds, utilities, and equipment). The Zoo has sixty separate structures of which eighteen are major buildings. The current plant value is over \$100 million and \$1,400,000 to \$2,000,000 will be required annually for structural, mechanical, and electrical repairs and renovation of the physical plant to support the Zoo's mission at a satisfactory level.

Conservation and Research Center

Pachyderm Facility - This project will provide a facility to house large hoofed stock for research and breeding. The site chosen is well suited for this purpose and will not be labor intensive with respect to support requirements. The facility will permit the Zoo to pursue actively the breeding programs for such critically endangered groups as rhinoceroses and tapirs. Amounts of \$400,000 for design and \$4,000,000 for construction will be requested in future years.

Water System and Hydrants - Worn and deteriorated water lines throughout the facility must be replaced and hydrants upgraded to meet fire and safety protection standards. This project is estimated to cost \$660,000.

Maintenance Facility - The maintenance trade shops that serve the Conservation and Research Center will be consolidated into one area for improved operations, security and accessibility. A group of supply buildings will be renovated and modified to serve this function, providing a separate service entrance and parking for the Center's motor pool operations and off-site employees. An amount of \$50,000 was provided for the design in the FY 1985 appropriation and \$1,000,000 will be requested in FY 1989 for construction. The space vacated by the present shops will be used to house student research activities.

Waterfowl Facility - The proposed waterfowl ponds at the Conservation and Research Center, presently estimated to cost \$1,100,000, will provide outdoor facilities for the study, propagation, and rearing of endangered waterfowl and crane species. At present the Center cannot engage in research and propagation of a variety of species that require year-round flat-water surface; consequently, the planned enclosures will include ponds that will be mechanically frost free or air-injected to prevent freezing in winter. Individual ponds will be enclosed with wire mesh fence and wire mesh ceilings. The location of the proposed complex will be the lowland area below the present hardy bird yard.

Primate Facility - This facility will enable the Center to expand the variety and number of primates accommodated in research programs while providing better protection of animals from communicable diseases to which these species are highly susceptible. The Zoo already has an international reputation for primate breeding programs. The building will be located in the core area, close to the small animal facility and veterinary hospital. The cost estimate for this facility is \$2,000,000.

Road Improvements/Extensions - This project includes providing access to new facilities with existing roads, and extending paved roads to outlying animal facilities. The work is expected to cost about \$1,100,000.

Renovation and Repairs - The Conservation and Research Center includes eighty-nine facilities of various types, containing approximately 236,000 square feet of space, two and one-half miles of paved roads, twenty miles of jeep trails, thirty miles of fences, and all related utility systems (sewer, water, electricity). This account is used to complete necessary repairs to structural, mechanical, and electrical components of the Center's physical plant, and is expected to cost about \$800,000 per year at the end of this planning period.

National Zoological Park
Construction Program
1974--1992

(\$000's)

Activity	1974-1986	1987	1988	1989	1990	1991	1992	Repro- gramming	Total
I. Master Plan									
Lion-Tiger Facility (1)	3,000								3,000
Elephant/Bird House	3,130							26	3,156
Education-Administration Building	2,500							(157)	2,343
General Services Facility	7,000							834	7,834
Lower Rock Creek	3,000							(1)	2,999
Beaver Valley Area	6,410							(431)	5,979
Central Area	10,390							(266)	10,124
Waterfowl Pond and Small Cats	520							(115)	505
Master Graphics	200								200
Veterinary Hospital	3,530							(69)	3,461
Health & Research Facility *	100							69	3,169
Entranceway & Olmsted Walk	2,350	600	3,000					362	6,583
Aquatic Exhibits (3)	1,651		3,271 (2)	7,000	13,000			(1)	21,650
Parking Facility (4)					1,500				13,500
Grassland and Forest Exhibits						1,500			16,500
Subtotals	43,781	600	6,271	7,000	14,500	13,500	15,000	351	101,003
II. Renovations, Repairs & Improvements									
Rock Creek	8,480	1,400	1,800 (5)	1,650	1,800	2,000	2,000	(116)	19,014
Total Rock Creek	52,261	2,000	8,071	8,650	16,300	15,500	17,000	235	120,017

* An amount of \$2,500,000 was requested in the FY 1987 budget to Congress, but due to revisions in construction plans this project has been moved to FY 1988.

(\$000's)

National Zoological Park
Construction Program
1974-1992
(Continued)

Activity	1974-1986	1987	1988	1989	1990	1991	Repro- 1992 planning	Total
-----	-----	-----	-----	-----	-----	-----	-----	-----
III. Conservation & Research Center								

Development Plan								

Hoofed Stock Barn	650							650
Small Animal Facility	1,680							1,680
Veterinary Hospital	1,400							1,400
Pachyderm Facility	200						(200)	0
Water Systems & Hydrants			60	600				660
Maintenance Facility	50		1,000		100	1,000	(35)	1,015
Waterfowl Facility								1,100
Primate Facility				100	100	1,000		1,100
Road Improvements/Extensions								0
Subtotal	3,980	0	0	1,060	800	2,000	0	7,605

IV. Renovations, Repairs & Improvements								

Conservation & Research Center	5,605	351	750	750	800	800		9,856

Total, Conservation & Research Center	9,585 (6)	351	750	1,810	1,600	2,800	(235)	17,461

GRAND TOTAL	61,846 (7)	2,351	8,821	10,460	17,900	18,300	0	137,478
=====	=====	=====	=====	=====	=====	=====	=====	=====

(1) Excludes \$275,000 for planning appropriated in FY 1973.

(2) Includes \$670,000 for Olmsted Walk Landscape Plan.

(3) FY 1989 Phase I funds are to be followed by Phase II in FY 1990; prospects of raising private funds for Phase II in lieu of some appropriations are under review.

(4) Citizen participation, through parking revenues will contribute approximately \$4,000,000 to the estimated construction costs of \$16,000,000 by FY 1991.

(5) Includes \$300,000 for Renovation of the Bird House Flight Cage.

(6) Excludes \$125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings Account.

(7) Excludes \$237,000 sequestered in FY 1986 under Gramm-Rudman-Hollings legislation.

BEYOND FY 1992

There is merit to looking further ahead than just five years in communicating to OMB, Congress, and others the Institution's operating and capital objectives and in contemplating resource levels to match these. The Smithsonian must look ahead ten to fifteen years if it is to continue to be successful in meeting its responsibilities to the public, the museum and scholarly communities, and the nation. This chapter presents a brief summary of longer-range possibilities based on institutional aspirations for programs and facilities to about FY 2000.

Basic activities in exhibition, collections management, education and other programs, of course, will continue. Research programs will continue to be emphasized as will quality services for the visiting public and Associate members. New buildings, where necessary, and careful attention to those now under the care of the Institution, require longer-range thinking if results are to be useful to the public. The most effective use of available federal and trust resources in achieving general objectives will continue to motivate overall management planning. As the planning period is extended, however, it becomes increasingly difficult to detail the varied opportunities and related management choices which will emerge. Nevertheless, it is possible to set down institutional desires, directions, and resources which can be realized if conditions external to direct management control permit. In interpreting materials contained in this chapter, it is important to highlight the following.

- . A generally favorable economic situation is assumed to prevail over time. The Administration is predicting that inflationary pressures on the nation's economy will continue at relatively low rates. For purposes of describing institutional plans beyond 1992, inflation is assumed to have only minimal influence.
- . Levels of appropriations for capital and operating projects as outlined in the preceding chapters for years FY 1988-1992 will be forthcoming from the Executive and Legislative branches of government which will allow the Institution to achieve its basic program requirements.
- . Visitation will remain strong.
- . Public acceptance of the Institution's various programs and products, and supporting trust funds generated through investments, Associates and auxiliary activities will continue to allow net proceeds to grow moderately and to be applied to Smithsonian objectives as approved by its Board of Regents.

- . Future transfers to the Institution of historic buildings that might be preserved for Smithsonian use are possible, but the timing is not known. Likewise, it is not possible to speculate on the availability of major new gift collections that might require special housing for display or other purposes.

Given these general assumptions, Smithsonian management predicts continued success through the turn of the century in developing resources to serve the public and the nation through its varied programs.

Program Expectations

With regard to longer-run developments, the Institution's activities have always spanned national and international interests, but in future years its multinational character should begin to flourish in an even greater fashion.

The Quadrangle, planned to open in 1987, will provide the Institution with sufficient space to display its art collections of Near and Far Eastern and African cultures, and to strengthen its ties with Latin America. The roots of these cultures run deep, and the contributions to man's development from these areas have been and will continue to be pervasive forces in the world. The Quadrangle programs will promote international research and the continuing search for peace and understanding. Content of the Institution's longer-range exhibition programs, as in the past, will continue to focus on historical, cultural and scientific achievements, and be based on the latest findings and interpretations of the international community of historians and scientific investigators. Many exhibitions will reflect the interdependence of nations in pursuing essentially common cultural and humanistic goals in a world of finite natural resources.

The Institution expects to apply increasing emphasis to its research programs, including both collections based and non-collections based areas. The Institution will build on its considerable expertise such as basic taxonomy and systematics, monitoring the effects of long-term environmental change, examining the basic components of matter, studying the universe, and expanding knowledge of animal behavior. Research endeavors expected to be more thoroughly cultivated and developed include archaeometry, species conservation, propagation, and veterinary medicine, studies of biological diversity, and man-related disciplines. Emphasis also will be placed on biological and systematics research to understand the basic properties of nature. The rapid development of new techniques and fabrication of new instruments in the field of astrophysics now opens the possibility of constructing telescopes to see in regions previously limited by technology. The Astrophysical Observatory is particularly interested in submillimeter wave lengths, perhaps the "last frontier" for ground based astronomical observations, and in future years will be adding to the store of astronomical knowledge in this area. Increased attention will be paid to developing closer collaborative ties among Smithsonian units interested in the history of science and technology, and to the role which this area plays in other intellectual pursuits of the Institution. In the arts, efforts will increase to focus complementary research

activities in art and culture. Completion of the Quadrangle facility will pave the way for expanded research and public programs related to the arts of Africa and Asia and the renovation and restoration of the Old General Post Office Building will provide additional impetus to the concept of a center for American art and culture at Gallery Place. Likewise, the planned expansion of the Cooper-Hewitt Museum will enable the fuller use of that Museum's decorative art and other collections and further development of public programs. The results of Institutional planning efforts, stemming from the period FY 1988-FY 1992 and including seminars, lectures, conferences, and exhibitions, will be coming to fruition as related to the subsequent publications and use of research data surrounding the Columbus Quincentenary.

Attention to basic aspects of managing collections will continue, as will collections expansion and refinement. Growth will be selective and acquisitions of quality and relevance to each museum's interests will be emphasized. As technology improves, new initiatives in conservation will be undertaken, and generally improved care and storage of the collections will be provided. New interpretations of America's history and culture will be reflected in increasingly thoughtful and sophisticated exhibitions based on our collections and selected borrowed objects. Some of these exhibitions will be made available to other museums, and those unable to visit Washington will be able to become acquainted with our museums and their collections through widely available traveling exhibitions and publications.

The Smithsonian will always have major responsibilities directed to the preservation and care of collections. Objects made by Man, or collected from nature, are the tangible products of our historically persistent struggles to comprehend and live with the environment, extend our mastery over it, improve our condition, and express our spiritual aspirations. The collection, interpretation, preservation, and transmission of knowledge related to natural collections and important objects is essential if this and future generations of people are to measure and understand the character of international cultural and natural change. The programs housed at the first Museum Support Center building will be fully operational by the mid-1990s. The facility and its programs were fundamentally conceived nearly two decades ago to provide space, laboratories, training areas, and equipment, all designed for the efficient storage, study, care and preservation of collections. In a visible fashion in future years, the Center and its operations represent the Institution's commitment to apply advanced research, conservation and preservation techniques to minimize the unavoidable toll of time on the products and discoveries of Man, and to allow them to be passed on as a resource for future research and exhibition.

Educational programs and services to the public, including classes, teaching materials, publications and other media activities, are expected to grow in number and variety. They will be produced and presented in a style and format which will be in keeping with the changes that will take place in the nation's classrooms, and in television and communications technologies. The activities of the fledgling National Science Resources Center should be established; institutional efforts to help revitalize the teaching of precollege science and mathematics through development of

various tools and information dissemination processes should be bearing fruit.

Operational Funding

With regard to federal funding growth associated with operations, the Smithsonian expects to keep abreast of inflation; obtain the necessary resources to implement its programs being planned for the Quadrangle and Support Center; become involved in new research activities as described earlier; experience some moderate increases for collections care and acquisitions, exhibitions, education, and other program opportunities as they arise; and extend its influence as a facilitator of new ideas and concepts in national and international scholarly communities.

Levels of S&E operating resources through FY 1992 are projected in earlier chapters as approximating \$267,000,000 ^{1/}. Using a three to four percent annual growth figure to cover inflationary cost increases and limited growth in programs for the period FY 1992-2000, the Institution would be operating at an appropriation level approaching \$350,000,000 in FY 2000. This figure is conservative, but a realistic indication of what could happen.

As in federal operations, the basic approach regarding long-range trust prospects is a conservative one. Sustained moderate growth in the Institution's endowment is a high priority now and will continue to be throughout the foreseeable future. During FY 1975-1986, pursuant to the Board of Regents' policy of increasing the Institution's endowments, the market value of endowments in restricted and unrestricted areas grew from around \$42,000,000 to about \$189,000,000 as a result both of gifts and transfers to these funds, as well as sound investment. Assuming a comparable economic climate and sound investment choices, that performance should continue. It is planned that a prudent portion of the Institution's net revenues will continue to be added to the unrestricted endowment. Support for programs may be further enhanced in the future if the Institution is successful in its fundraising efforts.

Overall, by the turn of the century, if trust revenues are sufficient to offset the effects of inflation, the Institution hopes to be able to increase its net earnings from auxiliary and business-related activities to about \$50,000,000. The pattern of applying unrestricted net funds throughout future years to institutional operations is expected to be much the same as now: to enhance endowments; to fund Board of Regents' approved programs in research, fellowship, exhibition, and education areas; to enhance program activities with the museums and bureaus; and to support central institutional administrative requirements.

^{1/} Projected level of S&E program resources including inflation and future year legislated pay increases.

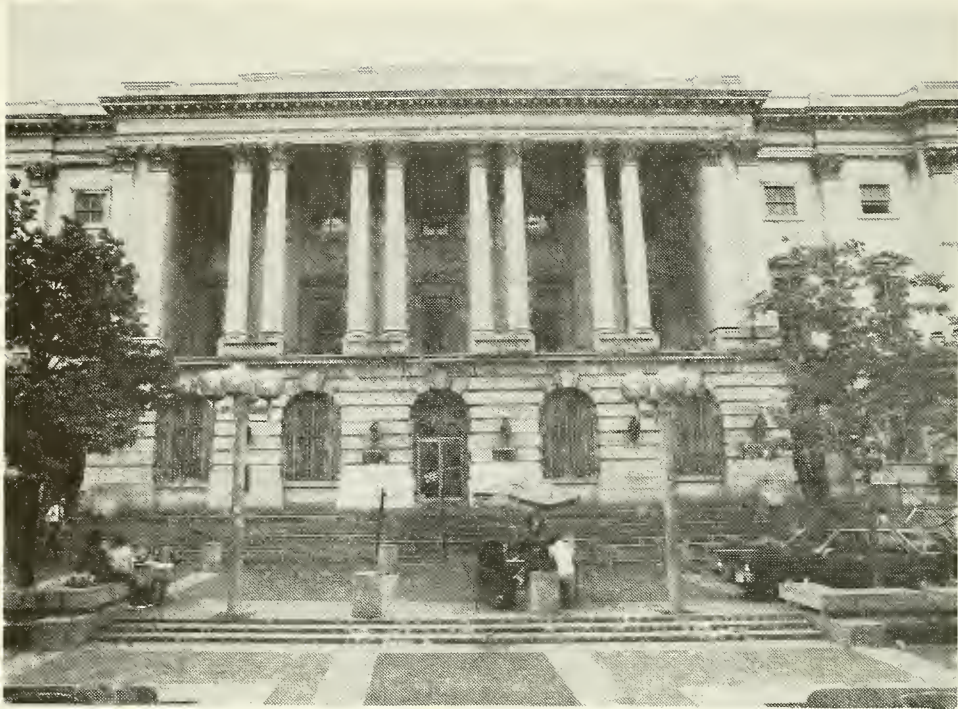
Grants and Contracts

Grants and contracts from the federal government have been a significant source of funds for Smithsonian contributions to scientific and cultural advances almost since the Institution's establishment. Government interest and support of the national basic research enterprise is expected to continue, and to nourish, through the grant and contract mechanisms, quality investigations into selected areas. The level of overall federal support to national research endeavors cannot be predicted with any certainty. The Institution, however, has distinguished itself in various research disciplines, and intends to continue to do so over the long run, partially through sustained grant and contract work received from the federal government, as well as its other sources of funding.

Buildings and Facilities

At the end of FY 1986, the Smithsonian occupied approximately 4,500,000 square feet of building space, owned or leased, for all purposes in facilities located in Washington and elsewhere. By FY 1992, with the full occupation of the planned Quadrangle facility, the completion of planned facility work for the Zoological Park, the Tropical Research Institute in Panama, the Cooper-Hewitt, Whipple Observatory, the first Air and Space facility at Dulles, and the administrative service center space occupied by the Institution will approximate 6,000,000 square feet. By FY 2000, if the Institution is successful in planning and accommodating its major space objectives, space available might approach 7,000,000 to 8,000,000 square feet. Implicit in the projections beyond FY 1992 are the following general institutional objectives:

- . Funding for added facilities for science programs at the Zoo, Astrophysical Observatory, and Air and Space Museum, will be forthcoming; and development funding for Cooper-Hewitt facilities will be obtained before FY 1992.
- . Restoration of the Old General Post Office Building to accommodate the expansion of the Institution's programmatic space requirements.
- . Consolidation of program, administrative, and support operations into Smithsonian-owned facilities on properties controlled by the Institution or the federal government, and minimum reliance on leased or rented locations.
- . Continued phased development of the Suitland properties for controlled warehousing, preservation, conservation, and study of the collections.
- . Acquisition of facilities convenient to the Mall to accommodate some museum activities, administrative office activities, and light industrial-type operations for technical, administrative and other support of museum operations.



Exterior view of the General Post Office Building from 7th and G Streets, N.W. Photo by Jeff Ploskonka.



Interior view of the General Post Office Building. Photo by Jeff Ploskonka.

The Suitland location seems ideal for fulfilling many of the Institution's consolidation and collection management objectives. The building recently opened at Suitland permits the Institution to meet many collections storage needs primarily in the natural history area, and to establish training and other conservation program space. A subsequent phase of development at Suitland would alleviate emerging collection storage pressures in the other bureaus. After 1992, as currently envisioned, the next development steps for the Suitland properties include an additional pod for the current building, a storage and laboratory building for the history and art functions, and a central facility for the libraries.

Zoological Park. Further development of the National Zoo beyond 1992 is dependent on future economic conditions. In this context, future year exhibitions and visitor services will be reevaluated to determine the most cost effective means to service the Zoo visitor and yet preserve the natural and historical character of the Park. The development plan for the Conservation and Research Center at Front Royal has reaffirmed past projections for modest facility development.

Other Science Facilities. Additional development of science facilities for the future will include improved research space for the Smithsonian Environmental Research Center at the Edgewater, Maryland site on Chesapeake Bay. The extent of these facilities, however, will not be on the scale formerly projected for the longer range requirements of the Institution. Efforts have recently begun for a master facility plan for the Museum of Natural History. The results of this process will have implications for future modernization and improvements necessary to maintain activities.

There also is the long-term need for storage and preservation facilities for large air and space craft. The museum visitor of the next century will be as interested in the Space Shuttle as the scholar or visitor of 1985 is in the Kitty Hawk flyer. As detailed in the Facilities Planning Chapter, design and construction of hangar-like buildings at Washington Dulles International Airport are currently envisioned and could span the years to the end of the century.

Astrophysical Observatory. It is anticipated that in the long run the construction of a submillimeter telescope array will take place for the exploration of the last unknown frontier of astronomy. Such an array could make fundamental contributions to understanding star formations, galactic structures, quasars, and planets; technical research has begun at the Smithsonian Astrophysical Observatory for eventual development of this array.

Anacostia Neighborhood Museum. During FY 1987, the Museum's administrative staff and exhibition space will be moved to the recently completed annex building adjacent to the present Exhibits Lab building at Fort Stanton Park. This move will allow the Institution to vacate leased property. At some point beyond FY 1992, consideration may be given to a new and modern museum building.

Administrative Office Building. The Institution now is reassessing its use of all Mall and leased space, including the effects on this space resulting from occupancy of the Museum Support Center and the Quadrangle. In expectation that only minimal reliance should be placed over the long run on leased space, the Institution needs to consider purchase or construction of office space near the Mall in order to reduce the longer term budget effects of continued rental escalation. In 1972, space at L'Enfant Plaza cost about \$8.50 per square foot; it now costs about \$25 per foot. Assuming that a purchase or construction cost could be amortized over a 10 to 20 year period at yearly expense not exceeding current annual rental costs, then, rental funds could eventually be put to other program purposes.

Mall Site. The property bounded by Third Street, Maryland Avenue, Fourth Street, and Jefferson Drive has been reserved by Congress for the future public use of the Smithsonian (P.L. 94-74, approved August 8, 1975). There are currently no plans for development of this site, but the Institution will continue to consider potential use of the land for establishing a last major Smithsonian Mall museum. In the meantime, it is expected that the site will continue to be used for temporary exhibitions and other purposes by federal and other organizations.

Maintenance and Improvements of Buildings. The Institution currently occupies many older buildings of cultural and historical importance to the nation, such as the headquarters Castle Building, the Arts and Industries Building, the Old Patent Office Building, the original Corcoran Art Building, and the Barney Studio House. As time passes, these buildings will continue to require added resources to assure their preservation and continued usefulness to the public and the Institution. In addition, many buildings of more recent construction will begin to require more attention.

At the present time, the Institution is devoting about \$13,000,000 to \$19,000,000 of federal funds annually to the renovation and restoration of its buildings, exclusive of utilities, custodial care, and basic maintenance provided through the operational budget. This amount is not adequate to address the major backlog of renovation requirements to upgrade building systems and provide for normal yearly care. The Institution foresees a need to increase its renovation and restoration efforts to about \$40,000,000 per year eventually. Management will make periodic assessments of the adequacy of renovation and restoration levels of funding and press for appropriate resource levels to take care of institutional renovation and restoration requirements. Beyond FY 1991, renovation, restoration, and modifications to existing space and systems in Mall and other buildings for exhibitions, research programs, access by the handicapped, fire, safety and health programs, energy conservation and the general preservation of historic facilities will continue to be among the highest priorities of the Smithsonian.

If improvements and additions to the Institution's physical plant occur, there will be, of course, related operating costs for necessary personnel, utilities, equipment and other items, expected to be funded largely through the federal appropriations process. While some operating and equipping needs have been estimated through FY 1992 for the Quadrangle,

and facilities associated with the Zoological Park, the Tropical Research Institute, and the Whipple Observatory, it is too early to speculate about similar resources related to longer-range building possibilities. This will be done, however, as plans become firmer and as the time horizon shortens to the three-to-five-year period usually associated with legislative, appropriation, and construction cycles for physical plant additions.

As refinements are made to the Institution's long-range construction and operational aspirations, Congress, the Executive Branch, and other constituents will be kept fully informed through many means of communication, including the Prospectus.

TABLE 5

QUADRANGLE:
ESTIMATED RESOURCES
ASSOCIATED WITH PROGRAM OCCUPANTS
AND SUPPORT OPERATIONS¹

(\$000)

<u>Activities</u>	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>	<u>FY 1991</u>	<u>FY 1992</u>
Program Operations ²					
Federal	\$ 7,790	\$ 8,142	\$ 9,330	\$ 9,383	\$ 9,698
Trust	25,199	26,893	28,439	30,312	32,149
Support Operations ³					
Federal	3,424	3,488	3,539	3,539	3,539
Trust	-	-	-	-	-
Utilities	687	816	890	970	1050
Totals					
Federal ⁴	\$11,901	\$12,446	\$13,759	\$13,892	\$14,287
Trust ⁴	\$25,199	\$26,893	\$28,439	\$30,312	\$32,149
	\$37,100	\$39,339	\$42,198	\$44,204	\$46,436

¹This table is meant to provide an overview of operational resources associated with those program units that will be occupying the Quadrangle, plus building and ground maintenance, utilities, some support from central offices, and trust operations. Not included are Freer Gallery of Art operations since base funds are not directed to Quadrangle activities.

²Program operations include the Museum of African Art, the Sackler Gallery (part of the Center for Asian Art, along with Freer Gallery) National and Resident Associate Programs, the Directorate of International Activities, and the Traveling Exhibition Service. Projections include about \$1 million additional appropriations over FY 1988 for Museum of African Art and Sackler Gallery programs; and about \$1 million appropriations for support of Columbian Quincentennial programs coordinated by the Directorate of International Activities.

³Support operations, for purposes of this table, include costs for protection and security, building and grounds maintenance, libraries requirements, exhibits central, accounting, personnel administration, and plant operations.

⁴Additional resources for operations and support will be raised from trust funds and donors to augment programs and selected activities in dollar amounts that cannot be estimated at this time.

APPENDIX I

APPLICATION OF SMITHSONIAN OPERATING
RESOURCES FY 1986 AND PROJECTED THROUGH
FY 1992 BY ORGANIZATION

RESEARCH

Assistant Secretary for Research. Administration of research programs rests with this Office; guidance, planning, and overall policy direction for scientific research efforts and research related education and exhibition activities are provided through the Assistant Secretary.

Joseph Henry Papers (JHP). Over the next five years, efforts will continue to collect, transcribe, edit and publish the manuscript of Joseph Henry, the first Secretary of the Smithsonian Institution.

Astrophysical Observatory (SAO). The major instrument theme for research during the planning period will be based on increased resolution both spatially, via interferometry, and spectrally, in all accessible wavelengths bands. A submillimeter interferometry instrument is being planned. Development of detectors at wavelengths from x-ray through submillimeter will be pursued. Improvements are also scheduled for the telescopes at the Fred L. Whipple Observatory and for the facilities there. The mirrors of the Multiple Mirror Telescope atop the Whipple Observatory will be replaced by a large 6.5 meter diameter reflector in order to allow this unique instrument to remain at the forefront of research in optical astronomy; further, SAO intends to replace its inadequate base camp with a new facility. A program of replacement and improvement of laboratory and computer equipment will continue over the period. The Observatory will be helping to improve the teaching of science and mathematics to precollege students by developing educational materials to engage student interest, taking advantage of the apparent universal attraction of the young to astronomy. SAO also will address and attempt to correct the shortage of support personnel that is hampering scientific productivity.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

TABLE 6 (1)

FY 1986 AND PROJECTED THROUGH FY 1992

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
RESEARCH														
ASSISTANT SECRETARY FOR RESEARCH														
FEDERAL SALARY & EXPENSES	17	505	18	937	18	937	18	937	18	937	18	937	18	937
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	1	112	1	101	1	102	1	103	1	104	1	105	1	106
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	87	0	3	0	22	0	25	0	25	0	25	0	25
RESTRICTED	10	300	15	1012	10	477	10	677	10	677	10	677	10	677
FEDERAL GRANTS & CONTRACTS	19	1013	7	567	5	614	5	618	2	225	2	232	2	239
-SUBTOTAL	47	2017	41	2620	34	2152	34	2360	31	1968	31	1976	31	1984
JDSEPH HENRY PAPERS														
FEDERAL SALARY & EXPENSES	5	169	5	182	5	182	5	200	5	200	5	200	5	200
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	2	0	1	0	1	0	1	0	1	0	1	0	1
RESTRICTED	0	2	1	55	1	22	1	22	1	22	1	22	1	22
FEDERAL GRANTS & CONTRACTS	0	16	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	5	189	6	238	6	205	6	223	6	223	6	223	6	223
ASTROPHYSICAL OBSERVATORY														
FEDERAL SALARY & EXPENSES	97	8321	97	9291	99	9806	112	10806	115	11806	120	12806	127	13806
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	47	2556	47	2866	47	2857	47	2997	47	3127	47	3277	47	3422
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	2	260	2	158	1	150	1	160	1	165	1	170	1	180
-ALL OTHER	0	555	0	513	0	562	0	595	0	625	0	655	0	690
RESTRICTED	0	211	0	103	0	113	0	114	0	119	0	124	0	129
FEDERAL GRANTS & CONTRACTS	107	13421	115	14898	130	21581	125	20890	125	22320	115	15490	110	13975
-SUBTOTAL	253	25324	261	27829	277	35069	285	35562	288	38162	283	32522	285	32202

Tropical Research Institute (STRI). During the planning period STRI anticipates strengthening its position as the principal center for studies in tropical biology, in the areas of molecular biology, biochemical evolution, aquatic biology, marine plankton, and soil and forest ecology. Educational and conservation activities will continue focusing on the unique features of the Barro Colorado Island Nature Monument. In addition, STRI will continue to make its resources available to organizations of the host country and other institutions to assist in programs of nature conservation and development. An important corollary of this work is the training of third-world students in tropical biology. To effectively support existing programs and to take advantage of unexpected opportunities, facilities modernization involving principal STRI sites, Naos, Galeta, Tivoli and Barro Colorado Island are planned. Construction of the new laboratory/conference center is to be completed in late FY 1988.

Environmental Research Center (SERC). The closing of SERC-Rockville will afford an opportunity to enhance long-term research activities at SERC-Edgewater. Programs on CO₂ monitoring and the effects of CO₂ on saltgrass marsh areas will be transferred to the site. Short term research needs in such fields as geochemistry, agronomy, hydrology, meteorology and hydrodynamics will be addressed through two to three year postdoctoral appointments. In the longer term additional staffing will be required to achieve a critical mass of staff. In FY 1987 funds will be used to add a modest addition to the present laboratory complex to house transferred programs from Rockville. In the future, a modest addition for scientific instrumentation shop will also be required.

Zoological Park (NZP). In 1989, the Zoo will celebrate its Centennial, and efforts during this planning period are directed at improving the quality of its programs and facilities. The Zoo will continue the development of long-term zoological and biomedical research activities at Rock Creek and Front Royal. Emphasis will be placed on research problems related to the captive management of wildlife and conservation biology, including physiology, ecology and behavior. Equipment needs to implement such programs will also be addressed during this planning period. The Zoo will continue to study reintroducing animals to their natural habitats. Training programs for developing wildlife conservation techniques in the tropics will focus on wildlife biologists from developing nations. The visiting public will be made more aware of the plight of endangered species through the use of signs, labels, and improved graphics. During the planning period facilities and exhibits work will continue on implementing the Rock Creek 1972 Master Plan. The projects include completion of the Entrance way and Olmsted Walk exhibits; construction of an aquatic exhibit; renovation of the hospital and research facilities; exhibits for grassland and forest animals. At the Front Royal Conservation and Research Center, appropriate facilities for waterfowl, road improvements, water systems and hydrants, and maintenance of the Center are being scheduled. Sound preventative maintenance programs will be pursued to include new buildings constructed at Rock Creek Park and Front Royal, Virginia.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 6 (2)

RESEARCH	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
TROPICAL RESEARCH INSTITUTE														
FEDERAL SALARY & EXPENSES	87	3634	87	4243	101	4533	115	4731	115	4833	121	5040	122	5025
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	2	109	2	164	2	176	2	183	2	190	2	197	2	204
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	167	0	170	0	174	0	180	0	185	0	190	0	195
-ALL OTHER	1	74	1	162	1	168	0	170	0	175	0	180	0	185
RESTRICTED	0	499	0	593	0	412	0	390	0	400	0	415	0	425
FEDERAL GRANTS & CONTRACTS	14	100	14	573	14	591	17	610	17	625	17	645	0	100
-SUBTOTAL	104	4583	104	5905	118	6054	134	6264	134	6408	140	6667	124	6134
SMITHSONIAN ENVIRONMENTAL RESEARCH CTR.*														
FEDERAL SALARY & EXPENSES	63	3334	62	3174	62	3174	66	3383	69	3527	73	3711	76	3880
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	1	81	1	84	1	89	1	92	1	94	1	97	1	100
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	15	0	13	0	13	0	13	0	13	0	13	0	13
-ALL OTHER	0	101	0	102	0	101	0	100	0	100	0	100	0	100
RESTRICTED	0	46	0	17	0	17	0	10	0	10	0	10	0	10
FEDERAL GRANTS & CONTRACTS	4	526	2	462	2	472	8	470	8	470	8	470	8	470
-SUBTOTAL	68	4103	65	3852	65	3866	75	4068	78	4214	82	4401	85	4573
NATIONAL ZOOLOGICAL PARK														
FEDERAL SALARY & EXPENSES	318	11023	318	11747	327	12229	336	13004	335	13054	339	13404	347	13854
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	1	115	1	120	1	120	1	123	1	126	1	129	1	132
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	126	0	177	0	126	0	130	0	135	0	140	0	145
RESTRICTED	1	210	1	429	1	626	1	951	1	1036	1	1037	1	1037
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	320	11474	320	12473	329	13101	338	14208	337	14351	341	14710	349	15168

* Retention of federal funds in FY 1987 and FY 1988 assumed; some reallocation of these funds to other research programs will occur.

Smithsonian Institution Archives (SIA). The Archives will extend archival and records management programs to all records-producing offices of the Institution, and will accept increases in volume and diversity of records transferred into the Archives to the extent of its space available during the planning period. The photographic collections survey will continue and produce finder's guides and a central database. Phased improvements in micrographic capability and oral history capability are planned for this period on a limited basis, and development of Archives capability to automate its internal collections management and handle automated, machine-readable records form operating offices will be vigorously pursued. Alternatives to present space will be examined; more space is needed in future years to accommodate increasing volumes of materials.

Smithsonian Institution Libraries (SIL). The principal objective of the Libraries over the planning period is to build a working collection to meet the needs of SI scholars, to identify and describe 400,000 titles not yet included in the SIL computer database, to begin treating preservation problems present in approximately ninety percent of the collections by microfilming and other techniques and to plan further for a central, permanent facility in which to consolidate the general reference, special and rare collections, central acquisitions and processing services and SIL administration. The SIL will continue to support directly the wide fields of SI scholarly research and public and administrative programs through its system of branches located in Washington, Cambridge, New York City, and Panama; its interlibrary loan services; and its online data services. Requirements for establishing library services in the Quadrangle are contained in the Libraries projections and are aggregated for display purposes in Table 5.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 6 (3)

RESEARCH	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
SMITHSONIAN ARCHIVES														
FEDERAL SALARY & EXPENSES	15	516	15	552	15	616	15	652	15	652	15	652	15	652
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	6	189	6	188	6	194	6	204	2	75	2	79	2	81
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	2	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	21	707	21	740	21	810	21	856	17	727	17	731	17	733
SMITHSONIAN INSTITUTION LIBRARIES														
FEDERAL SALARY & EXPENSES	96	4464	98	4836	98	4936	101	5184	101	5196	102	5151	102	5161
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	10	335	10	390	10	436	10	458	10	481	10	505	10	530
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	110	0	108	0	2	0	0	0	0	0	0	0	0
RESTRICTED	0	71	0	6	0	5	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	106	4980	108	5340	108	5379	111	5642	111	5677	112	5656	112	5691
RESEARCH-SUMMARY														
FEDERAL SALARY & EXPENSES	698	31966	700	34962	725	36413	768	38897	773	40205	793	41901	812	43515
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE *	68	3497	68	3913	68	3974	68	4160	64	4197	64	4389	64	4575
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	2	442	2	341	1	337	1	353	1	363	1	373	1	388
-ALL OTHER	1	1055	1	1066	1	982	0	1021	0	1061	0	1101	0	1146
RESTRICTED	11	1341	17	2215	12	1672	12	2164	12	2264	12	2285	12	2300
FEDERAL GRANTS & CONTRACTS	144	15076	138	16500	151	23258	155	22588	152	23640	142	16837	120	14784
-IDIAL	924	53377	926	58997	958	66636	1004	69183	1002	71730	1012	66886	1009	66708

* Less SAO overhead recovery

-3385

-3240

-3098

-2960

-2820

-2700

-2523

MUSEUMS

Assistant Secretary for Museums. The Office acts for the Secretary in coordinating and providing direction to the Institution's museum-related activities, maintains a liaison with national and international museum organizations, and undertakes special studies on museum operations and methodologies.

Office of Museum Programs (OMP). During the planning period, the Office of Museum Programs intends to continue museology training and counseling activities and its audiovisual and publication program. The number of museum training programs for Smithsonian staff will be maintained or possibly reduced, as will the frequency of regionally based and cosponsored workshops. The Office will continue to place emphasis on activities serving minority needs within the museum profession as well as meet urgent needs of the broader profession by offering high quality programming in museum methods and management.

Office of the Registrar (OR). This Office is responsible for Institutional development, oversight, and coordination of policies and practices related to the management of collections, including accountability procedures and information management techniques for all objects and specimens held by the Smithsonian. Inventory, one aspect of collections management touching on all these matters, has been and will continue to be an important concern throughout the planning period because all bureaus are required to conduct cyclical inventories now that their initial 1978-83 baseline inventories have been completed. A related concern will be the enhancement and updating of collection records to improve knowledge about and access to the collections. In addition, training programs will be developed to support Smithsonian personnel working in collection registration and related functions. The Office also will continue to manage the affairs of the Smithsonian's Registrarial Council and will develop collections management information for dissemination through this group.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 7 (1)

MUSEUMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
ASSISTANT SECRETARY FOR MUSEUMS														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	10	520	10	557	10	557	10	557	10	557	10	557	10	557
-PROGRAM & ADMINISTRATIVE	1	140	1	125	1	128	1	132	1	139	1	146	1	153
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	1	0	1	0	0	0	0	0	0	0	0
-ALL OTHER	0	6	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	11	666	11	683	11	686	11	689	11	696	11	703	11	710
OFFICE OF MUSEUM PROGRAMS														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	12	351	12	379	12	379	12	379	12	379	12	379	12	379
-PROGRAM & ADMINISTRATIVE	0	8	0	9	0	12	0	13	0	14	0	15	0	16
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	43	0	44	0	42	0	75	0	80	0	85	0	85
-ALL OTHER	0	15	0	15	0	16	0	15	0	15	0	15	0	15
RESTRICTED	3	439	3	262	2	151	2	150	2	150	2	200	3	250
FEDERAL GRANTS & CONTRACTS	0	13	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	15	869	15	709	14	600	14	632	14	638	14	694	15	745
OFFICE OF THE REGISTRAR														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	2	95	2	102	2	102	4	148	4	148	4	148	4	148
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	2	95	2	102	2	102	4	148	4	148	4	148	4	148

National Museum Act (NMA). The Act is a technical assistance program that makes grants for projects that will enhance the quality of museum operations. Through these grants the Act supports professional training in museum activities, research for the improvement of museum methods, and the dissemination of technical information to the profession through publications and workshops or seminars. Many NMA projects involve advanced training in the field of conservation and scientific research that will result in new techniques for conservators and better methods for the care and preservation of objects. Research projects funded by the National Museum Act, especially in conservation, have generally not received support from other funding sources. Since the National Museum Act has not been reauthorized for FY 1987, the Institution envisions using this funding to support the Smithsonian's own initiatives in conservation, research and training and other basic cooperation with the museum programs.

Museum of Natural History (NMNH). During the planning period, the Museum will continue to conserve and transport research collections being housed at the Museum Support Center. New integrated departmental programs will be initiated in the study of the biological diversity of tropical Latin America and Afro-Asia, the archaeology and anthropology of the native peoples of the Arctic and Arctic biology, and the effects of historical human disturbances on island ecosystems in the Caribbean, the Oceanic Pacific and the insular regions of Southeast Asia. The Museum also expects to become involved in a national project (with multi-agency support in collaboration with universities and independent natural history museums) to survey and inventory biotic resources of the United States which will lead to an assessment of the diversity of our plants and animals and their potential utility to humans. A special effort will be made to make more information available about American Indians to both the research community and to the public through increased accessibility and display of collections and related activities. The Museum will continue to research the evolution of ecosystems, the process of extinction both past and present. These will be greater emphasis on exchange and cooperation between NMNH and the academic natural history research centers at universities and private sector museums. Efforts will continue to upgrade the exhibit and public areas of the Museum, including halls, meeting rooms, museum shops and public dining facilities.

Air and Space Museum (NASM). During the planning period, the Museum will continue to strengthen research programs in the history and technology of aviation, space flight, and planetary geology. NASM has expanded its contacts with the research and university communities, added a Department for University Programs and a program for the history of space science. An important adjunct to the research activities, which will benefit collection management, exhibition and public programs, is the acceleration of the video disc and digital recording projects. Publications and the education programs will continue to emphasize precollege and higher education levels. The new IMAX film, "On the Wing," premiered in June 1986. New restaurant facilities will be completed during the period. Planning will continue during this five year period leading to a new facility on land at the Washington Dulles International Airport.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 7 (2)

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
MUSEUMS														
National Museum Act														
FEDERAL SALARY & EXPENSES	3	739	3	772	3	772	3	772	3	772	3	772	3	772
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	3	739	3	772	3	772	3	772	3	772	3	772	3	772
NATIONAL MUSEUM OF NATURAL HISTORY														
FEDERAL SALARY & EXPENSES	510	20193	510	21888	533	22991	574	24765	593	24729	572	24428	564	24375
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	1	116	1	201	1	121	1	126	1	132	1	138	1	144
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	378	0	371	0	340	0	295	0	293	0	294	0	295
RESTRICTED	7	1828	7	2598	7	3590	5	1505	5	1495	5	1506	5	1518
FEDERAL GRANTS & CONTRACTS	26	1062	26	1040	25	1022	25	1041	24	1057	24	1088	24	1121
-SUBTOTAL	544	23577	544	26098	566	28064	605	27732	623	27706	602	27454	594	27453
NATIONAL AIR AND SPACE MUSEUM														
FEDERAL SALARY & EXPENSES	211	8148	211	8712	217	9019	220	9184	220	9149	220	9149	218	8996
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	8	0	61	0	37	0	38	0	38	0	38	0	38
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	17	1404	13	1967	13	2075	17	2120	17	2170	17	2210	17	2255
-ALL OTHER	14	1161	16	1324	15	1166	13	1381	13	1409	13	1437	13	1466
RESTRICTED	0	446	0	622	0	506	0	508	0	518	0	528	0	538
FEDERAL GRANTS & CONTRACTS	3	281	3	246	3	289	3	295	3	301	3	307	3	313
-SUBTOTAL	245	11448	243	12932	248	13092	253	13526	253	13585	253	13669	251	13606

Museum of American History (NMAH). During this period the Museum plans to continue with its major reinstallation program, opening at least one new show each year; in addition, it will pursue a schedule of temporary exhibits for significant commemorations or themes. In particular, the Museum plans an exhibition commemorating the bicentennial of the signing of the United States Constitution and a major exhibition in celebration of the Columbus Quincentenary, together with the development of a new Native American Program. Concurrently, the Museum will begin implementation of its Master Plan for the renovation of the Museum building, now twenty three years old and badly in need of major repairs. This comprehensive work, including renovations to the roof, ventilation, fire protection, and removal of asbestos, has been planned to integrate with the Museum's continuing major reinstallation program. The second aspect of its Master Planning which the Museum expects to pursue during this period, is the twenty year space plan, which projects needs for the period based on a current study of collections growth and related requirements. Collections management during the coming five year period concentrates on the move to the Museum Support Center, renovation and asbestos removal at the Silver Hill facilities. Automation also must be advanced to support collections management, principally inventory and other collections accountability programs; automation support for management information and other needs also will be addressed. The Museum seeks to develop its research activities through a Center for the Study of American History, which would combine, in a more structured way, the existing research centers of the Museum, the Eisenhower Institute, The Afro-American Research Project, Archives Center and the Journal, "Technology and Culture". Such a Center would encourage intramural research, assist in the development of new collections such as the documentary holdings of the recently established Archives Center, promote new affiliations and provide and appropriate setting for an active program of seminars with published proceedings.

Museum of American Art (NMAA). Throughout the planning period, NMAA plans to concentrate on traditional program areas such as scholarly research, publications, exhibitions, conservation, public education and acquisitions. Enhancement of NMAA's foremost automated research resource, the Inventory of American Painting, and a nationwide field survey for the parallel Inventory of American Sculpture, will strengthen the Museum's position as a national resource for the study of American art. Exhibitions, research and collecting by the Renwick Gallery will continue to focus on American crafts and decorative arts. These programs will be strengthened over the coming years and there will be new emphasis on research in the crafts field. In 1986, the Museum initiated the biannual Smithsonian Studies in American Art; the Museum hopes to expand to a quarterly publication during the next five years.

Portrait Gallery (NPG). Two major exhibitions are planned in commemoration of the Bicentennial of the U.S.

Constitution: "The Portrait in America from 1700 to 1776," and "Portraits of Distinguished American Jurists." To coincide with the opening of the American Jurists show, an interpretive program to encourage the reading and understanding of the U.S. Constitution, to examine the lives of the men who wrote it, and the great legal figures who interpreted it, will be offered to high school classes of gifted and talented students. A symposium and a self-portrait program may also be presented in conjunction with this exhibition. Additional resources are needed to strengthen the Gallery's research program, to improve research facilities in the library and to broaden the publication program to include a series of guides to selected portions of the permanent collections.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 7 (3)

MUSEUMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
NATIONAL MUSEUM OF AMERICAN HISTORY														
FEDERAL SALARY & EXPENSES	301	11403	301	12357	311	12585	339	13607	354	14029	344	14014	330	13674
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	2	305	1	191	1	185	1	193	1	202	1	211	1	222
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	26	0	14	0	11	0	11	0	11	0	12	0	12
-ALL OTHER	3	671	2	669	2	554	2	588	2	613	2	639	2	665
RESTRICTED	9	1008	10	1572	9	1183	10	1194	5	731	5	770	5	794
FEDERAL GRANTS & CONTRACTS	2	47	1	6	0	0	1	49	1	50	1	51	1	52
-SUBTOTAL	317	13460	315	14809	323	14518	353	15642	363	15636	353	15697	339	15419
NATIONAL MUSEUM OF AMERICAN ART														
FEDERAL SALARY & EXPENSES	118	4586	118	4959	118	5134	118	5239	120	5312	121	5350	122	5440
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	52	0	62	0	49	0	51	0	53	0	55	0	58
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	5	0	7	0	9	0	12	0	12	0	12	0	12
-ALL OTHER	4	196	4	223	4	195	4	177	4	177	4	177	4	177
RESTRICTED	2	987	1	422	1	114	1	123	1	123	1	123	1	123
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	124	5826	123	5673	123	5501	123	5602	125	5677	126	5717	127	5810
NATIONAL PORTRAIT GALLERY														
FEDERAL SALARY & EXPENSES	83	3436	83	3770	86	3935	88	4004	88	4107	89	4172	89	4172
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	24	0	18	0	18	0	18	0	18	0	19	0	19
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	12	0	13	0	14	0	15	0	15	0	15	0	15
-ALL OTHER	0	74	0	63	0	96	0	100	0	100	0	100	0	100
RESTRICTED	0	149	0	218	0	336	0	150	0	150	0	150	0	150
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	83	3695	83	4082	86	4399	88	4287	88	4390	89	4456	89	4456

Hirshhorn Museum (HMSG). During the planning period, HMSG will continue to strengthen its research programs with active accessioning, deaccessioning and published work. A major exhibition commemorating the Columbus Quincentenary will take place during this period. The Museum also intends to strengthen its use of computers in various aspects of its daily operations.

Center for Asian Art (CAA). The opening of the Sackler Gallery in the Quadrangle will enable the Center for Asian Art to expand its programs in selected areas over the next five years. Staff and resources are projected for the Sackler Gallery to develop its traveling exhibition program, research, collections acquisitions and management and publications programs. Future year plans include expansion of the conservation staff of the Center subsequent to the renovation of the Freer which will result in expanded conservation facilities, collection storage and office areas. Additional funds to the Freer exhibition base will support updating of lighting, cases, general permanent collection installation and exhibitions in gallery space provided by the renovation. Emphasis will be placed on the development of an aggressive collections acquisitions program for both the Freer Gallery of Art and the Arthur M. Sackler Gallery to assure acquisition of the finest quality objects and to search for particular examples that strengthen existing holdings.

Archives of American Art (AAA). The Archives staff will direct attention to the management and care of the collections by strengthening its collections management operations, eliminating its processing backlog, organizing its collections, fine tuning the collection catalog, taking necessary conservation measures and converting collections management systems from manual to automated. Of immediate concern is the care of the photograph collection, for which curatorial support and conservation services are required. Conservation of 2,500 valuable oral histories is also a high priority and a system for proper handling and storage of the original tapes needs to be developed. The Archives will continue to plan for the eventual occupancy of the General Post Office Building, where for the first time all of the Archives' primary documents would be available in one location.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 7 (4)

MUSEUMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
HIRSHHORN MUSEUM & SCULPTURE GARDEN														
	77	2978	77	3233	78	3260	78	3310	78	3370	78	3363	78	3552
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	14	0	13	0	13	0	14	0	14	0	15	0	15
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	898	0	343	0	230	0	280	0	288	0	296	0	304
RESTRICTED	0	479	0	517	0	450	0	555	0	660	0	665	0	670
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	77	4369	77	4106	78	3953	78	4159	78	4332	78	4339	78	4541
CENTER FOR ASIAN ART														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	1	5583	1	164	1	73	1	76	1	80	1	81	1	86
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	9	0	5	0	0	0	0	0	2	0	3	0	4
RESTRICTED	21	1563	21	1905	21	1733	21	1880	21	1910	21	1940	21	1970
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	68	10097	90	6180	94	6051	94	6468	96	6672	97	6829	105	7177
ARCHIVES OF AMERICAN ART														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	23	0	79	0	79	0	79	0	80	0	80	0	80
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	20	0	0	0	0	0	0	0	0	0	0
RESTRICTED	14	1050	14	1013	14	858	14	864	14	890	14	917	14	945
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	32	1928	32	2043	34	1943	34	1974	34	2021	34	2069	34	2131

Cooper-Hewitt Museum (CHM). The Museum has started a major fundraising effort in order to undertake and complete improvements to its physical facilities. Exhibition programming and educational activities will continue during the fundraising cycle, and in off-site locations during any construction activity. Collections management efforts will focus on refinement of collections records, and, when appropriate, relocating the collections for renovation efforts to proceed. Increased resources for the care and preservation of the collections and to maintain the physical plant and facilities are needed. Similarly, additional support to manage graphic and archival collections not appropriately combined with the existing prints and drawings holdings, as well as curatorial support for its architectural, design, and wall coverings collections are needed.

Museum of African Art (NMAfA). During the planning period, NMAfA will continue to strengthen the quality of its collection to assure understanding of African visual traditions by the national and international audience it serves. The Museum will advance a substantive publication program including a collection series bulletin, exhibition catalogues and monographs based on scholarly research. A conservation program of examination, scientific testing and preservation of collection material will be accelerated and an annual conservation bulletin will be published. Special emphasis will be placed on the preservation of vintage photographic material in the collection of the Museum's Photographic Archives and the publication of a quarterly Archives newsletter. The NMAfA will host the VIII Triennial Symposium on African Art as well as an international working symposium on the art of the Luba in 1989.

Anacostia Neighborhood Museum (ANM). Completion and occupancy (in 1987) of the annex next to the present Exhibits Laboratory at Fort Stanton is the Museum's highest priority. The construction of this annex permits the Museum to vacate its leased space in the old Carver Theater and allows consolidation of activities and development of more varied and vigorous programming for the public. The need for a new and modern museum building will be examined over the period. Long-range plans include closer collaboration with other Smithsonian history and art museums involving joint research, systematic information collection and retrieval, education, collection and curatorial programs. Further, the Museum will continue to develop research and exhibition projects that support in-house and traveling exhibitions and to locate and interpret historical documents, artifacts, and memorabilia that are germane to Afro-American studies and ethnohistory for use in museum exhibitions.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 7 (5)

MUSEUMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
COOPER-HEWITT MUSEUM														
FEDERAL SALARY & EXPENSES	26	901	26	1011	26	1111	26	1126	26	1126	26	1126	26	1126
UNRESTRICTED GENERAL	18	743	19	820	19	844	19	871	19	899	19	928	19	958
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	4	693	4	675	4	694	4	715	4	736	4	758	4	781
UNRESTRICTED SPECIAL PURPOSE	0	425	0	349	0	323	0	333	0	343	0	353	0	364
-BUREAU ACTIVITY	1	524	1	586	1	641	1	849	1	874	1	900	1	927
-ALL OTHER	0	65	0	50	0	50	0	50	0	50	0	50	0	50
RESTRICTED														
FEDERAL GRANTS & CONTRACTS														
-SUBTOTAL	49	3351	50	3491	50	3663	50	3944	50	4028	50	4115	50	4206
NATIONAL MUSEUM OF AFRICAN ART														
FEDERAL SALARY & EXPENSES	40	2510	55	3342	56	3411	56	3396	56	3516	57	3544	58	3647
UNRESTRICTED GENERAL	2	57	1	121	1	40	1	42	1	45	1	48	1	50
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	3	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE	0	683	0	751	0	9	0	35	0	35	0	35	0	35
-BUREAU ACTIVITY	1	112	1	261	1	95	1	45	1	45	1	45	1	45
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED														
FEDERAL GRANTS & CONTRACTS														
-SUBTOTAL	43	3365	57	4475	58	3555	58	3518	58	3641	59	3672	60	3777
ANACOSTIA NEIGHBORHOOD MUSEUM														
FEDERAL SALARY & EXPENSES	19	850	19	910	19	910	20	927	21	952	22	973	23	999
UNRESTRICTED GENERAL	1	41	1	41	1	44	1	45	1	47	1	48	1	49
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	1	0	1	0	1	0	1
-ALL OTHER	0	0	0	1	0	1	0	1	0	1	0	1	0	1
RESTRICTED														
FEDERAL GRANTS & CONTRACTS														
-SUBTOTAL	20	891	20	952	20	955	21	974	22	1001	23	1023	24	1050

Conservation Analytical Laboratory (CAL). Activities are increasing as the Laboratory's conservation, scientific, and information staffs activate and utilize the new facilities. Equipment and work areas allow for more complete treatment of several classes of materials, and modern instrumentation permits a wider range of analysis and research to provide answers to pressing conservation questions. Research will also provide a technological base for new work in conservation techniques, for understanding mechanisms which govern deterioration processes, and for control of environmental conditions for museum objects. The range of objects subject to archaeometric research will be extended and the data bases produced by this research will be enlarged. Existing archaeometric data currently scattered in laboratories throughout the country are being brought together in the Smithsonian Archaeometric Research Collections and Records (SARCAR). All of these staff, laboratory and information resources are available for the development of the conservation training program. Acquisition of new equipment for the CAL laboratories and training areas is planned to be continued through FY 1987.

Office of Exhibits Central (OEC). The Office will continue to produce, install, and maintain exhibitions and to provide other specialized services to the bureaus of the Institution. Highly specialized OEC capabilities include design and editorial services, freeze-dry taxidermy and all types of model making. In support of the Office of Museum Programs, the OEC provides workshop training in exhibition media and techniques for museum professionals throughout the world. Over the course of this planning period obsolete equipment will be gradually replaced with more reliable and technologically current machinery. Some support for Quadrangle related exhibition programs is being sought in FY 1987 and is contained in the OEC trends below and also appear in Table .

Traveling Exhibition Service (SITES). Resources for Quadrangle and other support including Quincentennial research and exhibition activities are in the projections below through FY 1988 and also appear in Table 5. Education activities associated with SITES exhibitions will be sustained. These activities involve schools, multi-media workshops and workshops on new areas of education technology. Over the planning period the international exhibition program along with continued production and circulation of high quality exhibitions will be emphasized.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

TABLE 7 (6)

FY 1986 AND PROJECTED THROUGH FY 1992

MUSEUMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
CONSERVATION ANALYTICAL LABORATORY														
	39	1931	39	2069	40	2139	41	2259	42	2339	43	2394	44	2466
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	35	0	31	0	22	0	25	0	25	0	25	0	25
RESTRICTED	1	8	1	67	1	14	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	40	1974	40	2167	41	2175	41	2284	42	2364	43	2419	44	2491
OFFICE OF EXHIBITS CENTRAL														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	42	1533	46	1774	46	1774	49	1888	49	1888	49	1888	49	1888
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	110	0	122	0	120	0	120	0	120	0	120	0	120
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	42	1643	46	1896	46	1894	49	2008	49	2008	49	2008	49	2008
TRAVELING EXHIBITION SERVICE														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	9	391	15	601	16	701	16	701	16	701	16	701	16	701
-PROGRAM & ADMINISTRATIVE	0	0	7	250	7	260	7	270	7	280	7	290	7	300
-AUXILIARY ACTIVITY	31	1800	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	24	1695	24	1800	25	2000	26	2100	28	2400	29	2600
-ALL OTHER	0	61	0	21	0	14	0	30	0	30	0	30	0	30
RESTRICTED	3	842	3	890	1	698	2	800	1	800	0	800	0	800
FEDERAL GRANTS & CONTRACTS	0	32	0	22	0	18	0	30	0	30	0	30	0	30
-SUBTOTAL	43	3126	49	3479	48	3491	50	3831	50	3941	51	4251	52	4461

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 7 (7)

MUSEUMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
MUSEUMS - SUMMARY														
FEDERAL SALARY & EXPENSES	1566	64362	1613	71473	1665	74031	1746	77805	1786	78805	1761	78835	1749	79115
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	26	7114	32	2155	32	1903	32	1968	32	2041	32	2112	32	2188
-AUXILIARY ACTIVITY	31	1800	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	21	2186	41	4416	41	4646	46	4948	47	5124	49	5492	50	5760
-ALL OTHER	21	4722	22	4307	21	3085	19	3380	19	3451	19	3525	19	3601
RESTRICTED	62	9435	62	10934	58	10370	57	8624	51	8347	50	8545	51	8731
FEDERAL GRANTS & CONTRACTS	31	1500	30	1364	28	1379	29	1465	28	1488	28	1526	28	1566
- TOTAL	1758	91119	1800	94649	1845	95414	1929	98190	1963	99256	1939	100035	1929	100961

PUBLIC SERVICE

Assistant Secretary for Public Service. This Office provides administrative oversight and guidance to the

Institution's Public Service programs. Overall goals over the next five years are to broaden educational outreach initiatives and national and international constituencies.

Office of Telecommunications (OTC). The opening of new facilities for the office in the Museum of American History has resulted in an expanded capability to fill the demands received from bureaus for audiovisual services. The completion of the Quadrangle International Center and the launching of its programs will bring an increase in such requests. The Office will also proceed with development of its children's television series, designed for ages 9-12. Other projects planned or under consideration for the period include programs for young citizens relating to the Constitution Bicentennial in 1987, the application of teleconferencing to symposia and scientific meetings involving the Smithsonian, a potential radio series featuring a wide variety of American music, and major film, video or radio programs marking the Columbus Quincentennial in 1992. In addition, the Office will explore video projects designed to increase the Smithsonian's presence in the educational and home video markets.

Visitor Information and Associates' Reception Center (VIARC). Information and reception services for the public and Associate members of the Institution are projected to increase significantly with the opening of the Quadrangle, the phased opening of the new Smithsonian Information Center in the Castle (for which one million dollars has been received from the Pew Memorial Trust), and the continued implementation of the exterior graphic information system. Volunteer recruitment and training will be escalated to provide the appropriate level of staffing at museum and telephone information desks and in the new Information Center. VIARC will increase efforts to promote previsit education (through the tour and travel industry) and memberships in the Smithsonian Institution.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 8 (1)

PUBLIC SERVICE	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
ASSISTANT SECRETARY FOR PUBLIC SERVICE														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	4	212	4	224	4	224	4	224	4	224	4	224	4	224
-PROGRAM & ADMINISTRATIVE	4	187	4	293	3	213	3	220	3	228	3	235	3	243
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	10	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	12	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	8	421	8	517	7	437	7	444	7	452	7	459	7	467
OFFICE OF TELECOMMUNICATIONS														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	5	210	5	222	5	222	5	222	5	222	5	222	5	222
-PROGRAM & ADMINISTRATIVE	9	564	9	553	9	597	9	620	9	646	9	672	9	698
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	32	0	61	0	72	0	88	0	99	0	112	0	125
-ALL OTHER	0	172	0	2	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	14	978	14	838	14	891	14	930	14	967	14	1006	14	1045
VISITOR'S INFORMATION & ASSOCIATES RECP														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	2	156	3	203	3	203	3	203	3	203	3	203	3	203
-PROGRAM & ADMINISTRATIVE	21	708	21	826	21	875	21	919	21	965	21	1013	21	1064
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	1	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	23	865	24	1029	24	1078	24	1122	24	1168	24	1216	24	1267

Office of Public Affairs. For the third consecutive year, the Office conducted in FY 1986 a program to

increase minority visits to the Institution and minority participation in Smithsonian activities; radio, printed materials and televised public service announcements were part of the effort. The Office is producing a Spanish-language version of the Smithsonian News Service, a feature story service distributed to more than 1,550 newspapers nationwide. The Office is also distributing the Smithsonian News Service via Associated Press Data Feature to selected newspapers at cost. Media materials on Smithsonian research will continue to be produced. Electronic links between the central Office and various individual bureau public information offices will increase in order to speed the processing of news releases and other materials. Efforts will be intensified to increase public awareness of Smithsonian performances and cultural events. Intensive planning for the opening of the Quadrangle facilities is being carried out, with emphasis on coordination of pertinent activities, an overall pan-Institutional public affairs program and the planned production of a new general information brochure and other materials.

Smithsonian Institution Press (SIP). Long-range plans call for gradual growth of the university press division.

Emphasis will be placed on scholarly publications in anthropology, art and art history, American studies, aviation and space, natural history and museum management. Careful attention will continue to be given to electronic publishing (data base storage, retrieval and desktop publishing) and the establishment of a video cassettes division. The direct mail book division's goals are to continue to publish books of general interest primarily to Smithsonian Associates that are well-written and carefully researched. The records division will continue to produce one or two popular record packages a year and will start again releasing two or three scholarly records a year; the division is examining broader distribution through retail outlets.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

TABLE 8 (2)

FY 1986 AND PROJECTED THROUGH FY 1992

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
PUBLIC SERVICE														
OFFICE OF PUBLIC AFFAIRS														
FEDERAL SALARY & EXPENSES	12	573	12	642	12	611	12	611	12	611	12	611	12	611
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	4	382	4	544	4	430	4	452	4	474	4	498	4	523
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	4	0	11	0	11	0	12	0	13	0	13	0	14
-ALL OTHER	0	1	0	1	0	1	0	1	0	1	0	1	0	1
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	16	960	16	1198	16	1053	16	1076	16	1099	16	1123	16	1149
SMITHSONIAN INSTITUTION PRESS														
FEDERAL SALARY & EXPENSES	29	1073	29	1147	29	1147	29	1147	29	1147	29	1147	29	1147
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	35	13420	35	13390	36	14580	36	15880	36	16920	36	17670	36	18860
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	64	14493	64	14537	65	15727	65	17027	65	18067	65	18817	65	20007
PUBLIC SERVICE - SUMMARY														
FEDERAL SALARY & EXPENSES	52	2224	53	2438	53	2407	53	2407	53	2407	53	2407	53	2407
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	38	1841	38	2216	37	2115	37	2211	37	2313	37	2418	37	2528
-AUXILIARY ACTIVITY	35	13420	35	13390	36	14580	36	15880	36	16920	36	17670	36	18860
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	36	0	72	0	83	0	100	0	112	0	125	0	139
-ALL OTHER	0	184	0	3	0	1	0	1	0	1	0	1	0	1
RESTRICTED	0	12	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- TOTAL	125	17717	126	18119	126	19186	126	20599	126	21753	126	22621	126	23935

DIRECTORATE OF INTERNATIONAL ACTIVITIES

Directorate of International Activities. The Directorate consists of the International Center to be located in the Quadrangle, the Office of Service and Protocol and the Office of Publications Exchange. Responsibility for managing the Institution's Foreign Currency Program was transferred to the Directorate from the Office of Fellowships and Grants. The Directorate was created to monitor, coordinate and enhance the Smithsonian's array of work in the international field, and to plan, design and conduct programs of the International Center. The Directorate also is responsible for the pan-Institutional coordination and planning of the 1992 commemoration of the Columbus Quincentenary. Commencing in 1987 and continuing through 1992, this effort is anticipated to require substantial levels of support for programs ranging from publications to exhibitions. Although not reflected in the Prospectus figures, the Smithsonian is considering a joint project (with a broadcasting company and a noted independent producer) to film a ten-part television series to appear in 1989-1990 in anticipation of the Quincentenary commemoration; this project is intended to promote a broad understanding of the history of the confluence of indigenous and Hispanic traditions of the Americas. Foreign Currency funds, not part of the Institution's federal operating appropriation, are not included in the table below; however, throughout the planning period the Directorate will continue to administer funds previously appropriated to the Foreign Currency Program, and allocated under special arrangements such as the US-India Fund.

SPECIAL PROGRAMS

American Studies and Folklife Programs (OAmers and OFP). During FY 1987-92 the Office of Folklife Programs will continue to expand the Smithsonian Folklife Studies series with publication of monographs/films based on scholarly research of folkways still practiced or in living memory in a variety of traditional cultures; publish papers and reviews; organize living presentations within exhibitions mounted by other bureaus; plan and produce the annual Festival of American Folklife; and perform research on the Folkways Collection which is expected to be acquired by the Institution in early FY 1987. Activities which had been under consideration for future year festivals but which cannot be provided within constrained out-years funding levels include permanent programs on traditions of the workplace and on Black American and Native American cultures. The festival will continue to present the diverse cultures and traditions found in the United States, as well as programs representing ethnic groups worldwide. The Office of American Studies will continue to sponsor a graduate program in American material culture in cooperation with various universities in and outside of the Washington, D.C. area; the activities and resources associated with this program currently are not expected to change in a major fashion.

International Environmental Science Program (IESP). Over the five-year planning period, increasing attention will be paid to studies in tropical and subtropical regions where new knowledge is necessary to understand the complexities of biological diversity. Man-related activities, coupled with natural processes are causing severe disruptions to these ecosystems which serve as centers for important sources of food, pharmaceuticals and other products for man. The destruction of these ecosystems must be studied in order to develop a means to retard biotic degradation. During FY 1987-1992 additional sites are contemplated for study in the Neotropics and old world tropics to enhance efforts in biological diversity.

Office of Fellowships and Grants (OFG). The Office will continue to administer the Institution's fellowship programs and visiting academic appointments and internships. Since 1979, most of these activities have been supported with nonappropriated trust funds. Approximately 85 fellowships and 30 other awards are offered each year. The trust funding projected will allow for an approximate thirty percent growth in the number of awards and appropriate increases in the stipends. Increases are also planned for the Regent's Fellowship program (shown separately below). In addition, through the Office the Institution provides opportunities for minority students via the cooperative education and internship program; this effort will grow as appropriate funding materializes. A modest program to support visiting scholars (including third world participants) and a symposium fund will be expanded over this period.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 10 (1)

SPECIAL PROGRAMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
AMERICAN STUDIES & FOLKLIFE	8	680	8	735	8	785	8	1035	8	1035	8	1135	8	1385
	12	594	12	599	12	654	12	672	12	694	12	711	12	734
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	72	0	5	0	5	0	5	0	5	0	5	0	5
	0	26	0	50	0	37	0	41	0	41	0	41	0	41
	0	535	0	349	0	503	0	518	0	534	0	550	0	567
	0	345	0	1069	0	1198	0	670	0	690	0	711	0	732
	20	2252	20	2807	20	3182	20	2941	20	2999	20	3153	20	3464
	13	697	13	752	13	752	13	807	13	807	13	807	13	807
INTERNAT'L ENVIRONMENTAL SCIENCE PROGRAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	13	697	13	752	13	752	13	807	13	807	13	807	13	807
OFFICE OF FELLOWSHIPS & GRANTS	9	257	9	278	9	278	9	278	9	278	9	278	9	278
	4	97	4	109	4	116	4	125	4	128	4	132	4	136
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	1746	0	1953	0	2267	0	2497	0	2847	0	3227	0	3502
	0	31	0	62	0	62	0	55	0	15	0	15	0	15
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	13	2131	13	2402	13	2723	13	2955	13	3268	13	3652	13	3931

Office of Symposia and Seminars (OSSS)). The Office will continue to design public service educational programs combining the increase of knowledge with the diffusion of knowledge. Its interdisciplinary approach involves the search for significant themes, commemorations, issues, or problems requiring attention of a broad variety of specialties in the humanities and sciences. Through symposia, seminars, and books it serves as a bridge within academia on the one hand, and on the other a link between academics, the general public, and youth preparing for the duties of citizenship. Three major projects will require most of the Office's resources in the next decade: (1) encouraging Smithsonian cooperation with research centers, colleges, and universities to improve Americans' understanding of other societies and cultures, especially in the context of the Smithsonian's new Quadrangle complex; (2) serving as part of a national and international network of educators and other specialists to help commemorate the two hundredth anniversary of the U.S. Constitution and Bill of Rights; and (3) designing seminars and other activities in cooperation with other Smithsonian units for the five hundredth anniversary of the Columbian expedition to the New World. In addition, the Office will administer special projects of pan-institutional interest.

Office of Elementary and Secondary Education (OESE). Despite constraints on growth in FY 1988, the Office will carry on its plans to strengthen the Institution's role in addressing the crisis in pre-college education in the United States. Then in FY 1989, this effort will be increased through predominantly three areas of endeavor: more teacher training, expanded production of supplementary curriculum materials, and concerted efforts to strengthen relationships between museums and schools. Growth in readership of the publication Art to Zoo is projected but can be accommodated within existing federal resources. On the trust fund side, a number of experimental educational materials kits have been developed and more such units may be produced on various art, history, and science subjects based on Smithsonian collections and research interests. Regional workshops for teachers, production of learning materials for hospitalized children, a collaborative effort in the area of national children's radio with New York Station WNYC, activities for disabled visitors, summer intern programs for talented young people and exceptional teachers from across the country, and a program to introduce minority high school students to career opportunities at the Smithsonian are all expected to be in place and functioning well over the planning period.

National Science Resources Center (NSRC). During the next five years, one of the National Science Resources Center's priorities will be the improvement of science teaching in the nation's elementary schools. This effort was initiated with an elementary science conference in July 1986 that was attended by science museum educators, scientists, teachers, and science supervisors from throughout the nation. This conference will help the NSRC to establish a network of institutions involved in programs to improve the teaching of science in elementary schools. The NSRC will enlist the assistance of the institutions in this network to develop a database of elementary science teaching resources, disseminate information about these resources, and provide assistance to school systems that are planning elementary science program improvement efforts. The NSRC is also working with the Council of State Science Supervisors to provide an online computer information database of science teaching resources.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 10 (2)

SPECIAL PROGRAMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
OFFICE OF SYMPOSIA & SEMINARS														
FEDERAL SALARY & EXPENSES	3	95	3	200	3	100	3	100	3	100	3	100	3	100
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	2	156	2	194	2	160	2	165	2	175	2	175	2	200
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	47	0	71	0	0	0	135	0	150	0	165	0	185
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	5	298	5	469	5	260	5	400	5	425	5	440	5	485
OFF. OF ELEMENTARY & SECONDARY EDUCATION														
FEDERAL SALARY & EXPENSES	7	315	7	350	7	339	7	360	7	360	7	360	7	360
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	3	179	3	187	3	207	3	217	3	226	3	235	3	245
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	-7	0	2	0	2	0	5	0	4	0	5	0	5
-ALL OTHER	0	9	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	58	0	24	0	29	0	75	0	83	0	83	0	83
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	10	554	10	563	10	577	10	657	10	673	10	683	10	693
NATIONAL SCIENCE RESOURCES CENTER														
FEDERAL SALARY & EXPENSES	0	0	0	0	1	150	1	150	1	150	1	150	3	394
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	0	0	0	0	1	150	1	150	1	150	1	150	3	394

Collection Acquisition, Scholarly Studies, Education Program and Smithsonian Awards (CARE). These trust funds support a variety of institutional activities such as purchase of special collections, workshops for minorities and the handicapped, educational conference and products, and meritorious research projects. Some increase in funding is projected if the Institution's revenue generating activities continue to perform in a good fashion.

Special Exhibitions Program. Projections of trust support are based on the continued good performance of the Institution's business, auxiliary, and Associates programs. This is a special Regents' program for funding meritorious exhibit proposals from bureaus which cannot be accommodated within available federal base resources. These efforts also may be partially funded with gifts and grants from outside donors.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 10 (3)

SPECIAL PROGRAMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
REGENT'S FELLOWSHIPS & PUBLICATION FUNDS														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	140	0	200	0	240	0	250	0	300	0	350	0	350
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	0	140	0	200	0	240	0	250	0	300	0	350	0	350
CARE.RES.OPPORT..SMITHSDN AWARDS														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	3319	0	3605	0	4325	0	4750	0	5300	0	5750	0	6250
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	0	3319	0	3605	0	4325	0	4750	0	5300	0	5750	0	6250
SPECIAL EXHIBITION PROGRAM														
FEDERAL SALARY & EXPENSES														
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	2800	0	2700	0	3000	0	3000	0	3000	0	3500	0	3500
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	0	2800	0	2700	0	3000	0	3000	0	3000	0	3500	0	3500

Collection Management/Inventory Program. These funds have been used, beginning in FY 1979 with appropriation of \$500,000, to initiate and conduct the first complete inventory in the Institution's history. Approximately \$1,300,000 is being requested for FY 1988 to continue the program and to process the current inventory workload. The resources will be used for reconciling of records, maintaining a stable effort in documenting incoming objects, and automating various collection record systems throughout the Institution.

Museum Support Center (MSC). Trends portrayed for FY 1988 through FY 1992 reflect plans to meet the initial operating and equipping requirements (exclusive of utilities) for the Center. Over the period, about \$18,000,000 is planned for investing in equipment requirements. Operating funds for administration and maintenance of the MSC are projected at about \$1,000,000 annually and costs of about \$2,700,000 to support the physical transfer of collections from museums are projected over the period. Funds for operational costs of program units which are involved in the MSC are included in the appropriate base of the units. Utilities are included in the Facilities Services chapter, along with security, building engineers, and other requirements.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 10 (4)

SPECIAL PROGRAMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
COLLECTIDNS MANAGEMENT/INVENTORY PRDGRAM														
FEDERAL SALARY & EXPENSES	38	1073	38	1145	48	1338	54	1273	54	1273	54	1273	54	1273
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPDSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBDTAL	38	1073	38	1145	48	1338	54	1273	54	1273	54	1273	54	1273
MUSEUM SUPPDRT CENTER EQUIP./OPERATIONS														
FEDERAL SALARY & EXPENSES	36	4680	36	6366	36	6366	40	8389	40	5409	41	3655	41	2160
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PRDGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	204	0	60	0	55	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBDTAL	36	4884	36	6426	36	6421	40	8389	40	5409	41	3655	41	2160
JOHN F KENNEDY CENTER TRUSTEE GRANTS														
FEDERAL SALARY & EXPENSES	0	333	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	0	333	0	0	0	0	0	0	0	0	0	0	0	0

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 10 (5)

SPECIAL PROGRAMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
SPECIAL PROGRAMS-SUMMARY														
FEDERAL SALARY & EXPENSES	114	8130	114	9826	125	10108	135	12392	135	9412	136	7758	138	6757
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	21	1026	21	1089	21	1137	21	1179	21	1223	21	1253	21	1315
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	65	0	7	0	7	0	10	0	9	0	10	0	10
-ALL OTHER	0	8244	0	8572	0	9924	0	10538	0	11488	0	12868	0	13643
RESTRICTED	0	671	0	506	0	594	0	783	0	782	0	813	0	850
FEDERAL GRANTS & CONTRACTS	0	345	0	1069	0	1198	0	670	0	690	0	711	0	732
- TOTAL	135	18481	135	21069	146	22968	156	25572	156	23604	157	23413	159	23307

ASSOCIATE PROGRAMS

Office of Membership and Development (OMD). The Office serves as the focus for fund-raising activities of the Institution and oversees the operations of the National and Resident Associate Programs. As the bureaux assume greater responsibility for their own fund-raising, the Office will concentrate increasingly on pan-Institutional needs.

Smithsonian Magazine. Expenditures are expected to increase substantially due to continued cost increases associated with publication. Demand should remain strong, and the Magazine will continue to operate and produce a surplus for institutional program activities.

National Associate Program (SNAP). Continued expansion is forecast for all SNAP programs throughout the period; demand for travel, lecture and seminar programs should remain strong, while new acquisition, upgrade and retention strategies will precipitate continued growth in the Contributing Membership Program.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 11 (1)

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
ASSOCIATES PROGRAMS														
OFFICE OF MEMBERSHIP & DEVELOPMENT														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	17	992	18	959	20	947	20	987	20	1017	20	1048	20	1080
-PROGRAM & ADMINISTRATIVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE	0	11	0	13	0	13	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	3	191	3	322	3	179	3	175	3	69	0	15	0	15
-ALL OTHER	0	49	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	20	1243	21	1294	23	1139	23	1162	23	1086	20	1063	20	1095
SMITHSONIAN MAGAZINE														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	89	54135	90	58500	91	62425	91	66800	91	71500	91	76500	91	81800
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	89	54135	90	58500	91	62425	91	66800	91	71500	91	76500	91	81800
NATIONAL ASSOCIATES PROGRAM														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	49	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	38	14290	38	15485	39	16595	43	17765	47	19020	52	20345	57	21750
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	45	0	46	0	47	0	47	0	49	0	51	0	52
-ALL OTHER	0	0	0	32	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	38	14335	38	15612	39	16642	43	17812	47	19069	52	20396	57	21802

Resident Associate Program (SRAP). During FY 1987, RAP will be becoming familiar with the new offices and Education Center in the Quadrangle. In addition, computerization of the RAP offices will be taking place, along with updating the newsletter technology and format. Annual membership drives are planned to increase membership by about 5% annually.

Air and Space Magazine. The projections are expenditure estimates, and reflect start up costs related to the first few years of operation. Circulation is expected to be around two hundred thousand in the beginning. The effort should begin to produce some small surplus about the third year of operation, with initial investment recovered in the fourth year.

SMITHSONIAN INSTITUTION

APPLICATION OF OPERATING FUNDS

FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 11

(2)

ASSOCIATES PROGRAMS	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
RESIDENT ASSOCIATES PROGRAM														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	50	3570	50	3985	52	4250	53	4420	54	4600	55	4780	56	4970
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	2	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	43	0	36	0	23	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS														
-SUBTOTAL	50	3615	50	4021	52	4273	53	4420	54	4600	55	4780	56	4970
AIR & SPACE MAGAZINE														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	21	5125	24	7840	26	8080	26	8815	26	10080	26	10840	26	11600
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS														
-SUBTOTAL	21	5125	24	7840	26	8080	26	8815	26	10080	26	10840	26	11600
ASSOCIATES PROGRAMS-SUMMARY														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	17	992	18	1008	20	947	20	987	20	1017	20	1048	20	1080
-PROGRAM & ADMINISTRATIVE	198	77120	202	85810	208	91350	213	97800	218	105200	224	112465	230	120120
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	11	0	13	0	13	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	3	238	3	368	3	226	3	222	3	118	0	66	0	67
-ALL OTHER	0	92	0	68	0	23	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS														
-TOTAL	218	78453	223	87267	231	92559	236	99009	241	106335	244	113579	250	121267

BUSINESS MANAGEMENT

Business Management Office/Product Licensing. A strengthened Product Development and Licensing program will emphasize educational toys and other products which will increase public knowledge of Smithsonian collections and activities.

Museum Shops. Expanded shops are planned in the National Museum of Natural History and the National Air and Space Museum to improve customer services and to enhance merchandise presentation. The museum shop in the National Museum of African Art will move to the new Quadrangle facility. Overall, the museum shops will continue to incorporate technological advances in retail management and aim for increasing professionalism in operations.

Mail Order Division. The Mail Order Division will continue to publish three main catalogues each year: Fall, Spring, and Summer. These may be supplemented by specialized catalogues designed to appeal to particular markets, and by advertising products in selected magazines. List segmentation will continue and will become increasingly refined.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 12 (1)

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
BUSINESS MANAGEMENT														
BUSINESS MANAGEMENT OFFICE														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	8	700	8	735	8	755	8	820	8	850	8	880	8	910
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	8	700	8	735	8	755	8	820	8	850	8	880	8	910
MUSEUM SHOPS														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	215	16780	220	19015	228	20050	237	21200	246	22100	254	23000	260	24100
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	215	16780	220	19015	228	20050	237	21200	246	22100	254	23000	260	24100
MAIL ORDER DIVISION														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	75	15510	79	17115	85	18715	90	19900	94	21200	99	22600	102	24100
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	75	15510	79	17115	85	18715	90	19900	94	21200	99	22600	102	24100

Concessions. Construction of a restaurant addition to the National Air and Space Museum to meet public needs is under consideration; renovation of the restaurant facilities in the American History and Natural History buildings also planned. Other eating facilities will also be upgraded. New concessions contracts are being negotiated.

Parking. As a result of recent changes, the public parking program is being terminated.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 12 (2)

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
BUSINESS MANAGEMENT														
CONCESSIONS														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	1	330	1	245	1	255	1	2110	1	2170	1	2240	1	2300
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	217	0	228	0	307	0	322	0	338	0	355
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	1	330	1	462	1	483	1	2417	1	2492	1	2578	1	2655
PARKING OPERATIONS														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	16	595	16	220	0	0	0	0	0	0	0	0	0	0
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-SUBTOTAL	16	595	16	220	0	0	0	0	0	0	0	0	0	0
BUSINESS MANAGEMENT-SUMMARY														
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED GENERAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-PROGRAM & ADMINISTRATIVE	315	33915	324	37330	322	39775	336	44030	349	46320	362	48720	371	51410
-AUXILIARY ACTIVITY														
UNRESTRICTED SPECIAL PURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	0	0	217	0	228	0	307	0	322	0	338	0	355
RESTRICTED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-TOTAL	315	33915	324	37547	322	40003	336	44337	349	46642	362	49058	371	51765

ADMINISTRATIVE, FINANCIAL AND OTHER SUPPORT SERVICES

Central Management Offices. The planning period will see a continued examination of the organization structure and resource base of the Institution with necessary changes to strengthen functional relationships, coordination and communications and the allocation of resources to the highest priority programs. Close oversight will be provided to the development of research and scholarship. Administrative and support functions will be monitored to assure their responsiveness and performance. The Institution's planning function will be given greater weight in relationship to the budget process and will build on recent efforts to gain greater involvement of bureaus and offices in decision-making processes. Continued strong attention will be given to the legal oversight of and counseling on Smithsonian programs and to improvement of financial management and internal control systems. The Institution's audit and investigative programs will perform additional positive and preventive work. The Office of Management and Budget, Congress and other organizations will be kept informed of plans and programs. Legislative initiatives will be developed and presented. Overall resources expected in FY 1992 for central administration of the Institution amount to about \$4,172,000 and 56 staff.

Specialized Administrative and Technical Offices. Continued attention will be given to providing timely and high quality services to Smithsonian bureaus and offices and to the public where appropriate. Automatic data processing will be applied more comprehensively in budget, personnel, financial management, procurement, photographic services, equal opportunity and other areas to improve efficiencies, cope with heavier workloads, provide more effective communications and strengthen controls. Legislated changes to the Civil Service retirement, reduction in force, and performance management systems will be implemented. Trust employee benefits programs will be studied and desirable changes put in effect. Benefits communications for all employees will be improved. Statistical analyses and reporting of equal opportunity data will become more useful as management tools and further affirmative action training will be provided to managers and supervisors. Employment opportunities and program accessibility for disabled persons will be stressed. The expansion of the accounting service units, on-line query systems, and daily financial updating will contribute to improved financial management and accountability. Increased efficiency in transaction processing and reporting will be of primary importance. An improved system of small purchases will be installed throughout the Institution to achieve greater accountability and control for added goods and services and to facilitate timely payment of the accounts payable. Contracting procedures, including more analysis of negotiated procurements, will be strengthened and the property management system will rely more heavily on automated procedures. Progress will be made with regard to replacing the current accounting system. Special emphasis will be given to the development and implementation of new automated systems covering the accounts payable, general ledger, and accounts receivable and payable. Information resource management efforts will concentrate on final installation of the bibliographic system, and on development of a collections information system to support collections management and research. A communications network will be installed between and within buildings to allow access to new computer systems. The nitrate film conversion project will be completed and

improved data processing techniques will be applied to photographic work order control and analysis. Cold storage and the study of preservation of photographic materials will be expanded and the inventory will be continued using video disc and other modern technology. Duplicating equipment will be upgraded and new slide programs and posters will be prepared for public sales. Additional assistance will be given to the Institution's professional research staff to locate and obtain grant and contract support. A phased program of contract service reviews will be continued and internal control problems will be inventoried and corrections monitored. Travel assistance will be given. Special events will be planned and managed to assist in presenting Smithsonian exhibitions and other programs. Support will be given to the operations of programs in the Museum Support Center and the Quadrangle. Overall resources expected in FY 1992 for specialized administrative and technical services amount to about \$26,508,000 and 463 staff. Additional resources over the planning period will be directed at personnel, financial and procurement management, and replacement and upgrading of duplicating and other equipment.

Facilities Offices. During the planning period, the proprietary alarm system will be installed throughout

Smithsonian museums and be finally operational replacing contract services. The program to modernize alarms and other security devices will be continued. An effort will be made to correct base shortages in the security and maintenance programs which presently result in galleries being closed to visitors and inadequate care to the physical plant. Trade and craft service support to programs will be reduced to free resources for building maintenance. Long range planning for facilities requirements will be strengthened and automation will be extended to all operations. Substantial new resources will be sought to meet legal and regulatory requirements for occupational health, industrial hygiene, fire protection and other safety programs for staff and visitors. The history and architecture of Smithsonian buildings will be documented. Resources devoted to facilities and related operations are forecast to grow to \$71,684,000 and 1,389 staff by FY 1992.

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 13 . (1)

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
CENTRAL MANAGEMENT OFFICES														
CENTRAL MANAGEMENT OFFICES-SUMMARY														
FEDERAL SALARY & EXPENSES	35	1683	34	1741	37	1932	38	1969	38	1969	38	1969	38	1969
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	18	1483	18	1978	18	1804	18	1890	18	1950	18	2010	18	2074
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-ALL OTHER	0	74	0	12	0	12	0	12	0	12	0	12	0	12
RESTRICTED	0	108	0	99	0	99	0	117	0	117	0	117	0	117
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-TOTAL	53	3348	52	3830	55	3847	56	3988	56	4048	56	4108	56	4172
SPECIALIZED ADMIN & TECH OFFICES-SUMMARY														
FEDERAL SALARY & EXPENSES	231	10937	237	11929	247	13255	261	14106	267	14309	269	14404	271	14495
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	168	6109	176	9037	176	9702	176	9476	176	9817	176	10144	176	10497
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	16	1053	16	1258	16	1222	16	1271	16	1349	16	1429	16	1514
-ALL OTHER	4	1634	4	1069	0	412	0	113	0	302	0	2	0	2
RESTRICTED	0	8	0	54	0	0	0	0	0	0	0	0	0	0
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-TOTAL	419	19741	433	23347	439	24591	453	24966	459	25777	461	25979	463	26508
FACILITIES OFFICES-SUMMARY														
FEDERAL SALARY & EXPENSES	1167	49575	1256	57038	1287	58876	1319	61605	1345	63982	1362	66528	1364	68889
UNRESTRICTED GENERAL														
-PROGRAM & ADMINISTRATIVE	16	2033	16	1919	16	2011	16	2111	16	2208	16	2310	16	2418
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPOSE														
-BUREAU ACTIVITY	5	39	6	40	6	44	6	60	6	66	6	69	6	74
-ALL OTHER	2	71	3	187	3	195	3	214	3	214	3	214	3	214
RESTRICTED	0	7	0	7	0	7	0	7	0	7	0	7	0	8
FEDERAL GRANTS & CONTRACTS	0	0	0	0	0	0	0	1	0	1	0	1	0	1
-TOTAL	1190	51725	1281	59191	1312	61133	1344	63998	1370	66478	1387	69129	1389	71604

SMITHSONIAN INSTITUTION
APPLICATION OF OPERATING FUNDS
FY FY 1986 AND PROJECTED THROUGH FY 1992

TABLE 13 (2)

	FY 1986		FY 1987		FY 1988		FY 1989		FY 1990		FY 1991		FY 1992	
	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)	FT EMPL	\$ (000)
ADMIN, FIN'L & OTHER SUPPRT SVCS														
ADMIN, FIN'L & DTHR SUPPRT SVCS - SUMMARY														
FEDERAL SALARY & EXPENSES	1433	62195	1527	70708	1571	74063	1618	77680	1650	80260	1669	82901	1673	85353
UNRESTRICTED GENERAL														
-PRDGRAM & ADMINISTRATIVE	202	9625	210	12934	210	13517	210	13477	210	13975	210	14464	210	14989
-AUXILIARY ACTIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED SPECIAL PURPDSE														
-BUREAU ACTIVITY	21	1092	22	1298	22	1266	22	1331	22	1415	22	1498	22	1588
-ALL OTHER	6	1779	7	1268	3	619	3	339	3	528	3	228	3	228
RESTRICTED	0	123	0	160	0	106	0	124	0	124	0	124	0	125
FEDERAL GRANTS & CDTRACTS	0	0	0	0	0	0	0	1	0	1	0	1	0	1
- TOTAL	1662	74814	1766	86368	1806	89571	1853	92952	1885	96303	1904	99216	1908	102284
Less SI overhead recovery		-8045		-8700		-9000		-9200		-9400		-9600		-9800
- Program and Administrative														

APPENDIX II

COLLECTIONS RELATED RESEARCH

The results of curatorial research on the collections in the Freer Gallery of Art are most visible in exhibitions. However, additional research is made available to the public through collection research records, free gallery leaflets, public lectures and in published papers, articles and books. Specific areas of current research in Japanese art include an ongoing study of Japanese ceramics, clan patronage of Japanese ceramics during the Edo period (exhibition: "Garden Potteries and Official Kilns: Clan-sponsored ceramics of the Edo Period"), calligraphy (exhibition: "From Concept to Context: Approaches to Asian and Islamic Calligraphy"), and paintings and prints (exhibitions: "Japanese Screens: Landscapes and Famous Places: and "literary Themes in Japanese Art").

In the field of Chinese art, research on Ming and Ch'ing dynasty calligraphy and painting resulted in two exhibitions: "Ming Dynasty Calligraphy and Painting" presented comparisons of calligraphy and painting by forty different artists of the Ming dynasty (1368-1644), through a selection of twenty-five hand- and hanging scrolls. "Painting and Calligraphy from the Ch'ing Dynasty" exhibited approximately thirty masterpieces of Ch'ing dynasty (1644-1911), plus new acquisitions from the same period. The calligraphy included early scripts such as clerical and seal script. The paintings featured masters of the orthodox school as well as the individualist. This show provided a sequel to the exhibition of similar types of works from the Ming dynasty mentioned above.

"Bird and Flower Painting" was another exhibition discussing a particular subject matter common to Chinese painting. "Chu Da's Influence on Qi Baishi," a paper centering around the Freer and Sackler's Chinese collection will be presented to the International Conference on Ba-da Shan- ren to be held in China in the Fall of 1986.

As the Freer Gallery's contribution to the nation-wide "Festival of India," "The Arts of South Asia" was organized to include some seventy objects representing a complete survey of the Freer's painting, sculpture and decorative art from the Indian Subcontinent, and spanning the 2nd century B.C. through the 18th century.

Research in the art of the Near East involved extensive investigation of 15th century Iranian art. Results include an article on the Iskandar Sultan (a major patron of the period), a detailed analysis of two groups of over one thousand drawings used as models for finished paintings, and the compilation of a comprehensive data base on patrons and patronage under the Timurids. Exhibitions included "Islamic Metalwork from the Freer's Collection", "Wonders of Creation Oddities of Existence: An Exhibition in Celebration of Halley's Comet", and "Drawings from the Riza-i Abbasi Album." Riza-i Abbasi is acknowledged by art historians to have been among the greatest artists of Iran's Safavid empire (1502-1736).

The Technical Laboratory of the Freer Gallery is renowned for its research activities, in addition to the ongoing conservation and restoration of objects in the collection. In the past year the staff of the Technical Laboratory has been primarily concerned with preparing the objects in the Sackler gift for exhibition. Specific Freer research included the study of unusual copper green pigments on Ukiyo-e paintings, "lead white" on Japanese paintings, identification of pigment samples taken from excavated objects (dated to the 5th-8th centuries A.D.) in Korean museums, microscopic identification of paper fiber samples where the samples available are very small, analysis of high-tin bronze mirrors from Aranmula in India and technical analysis of Japanese ceramics by the famous potter Kenzan.

Research is the fundamental focus of the Arthur M. Sackler Gallery, providing the basis for exhibitions, publications and collections acquisitions. The research program involves both visiting scholars as well as the curatorial staff. Considerable research has been necessary to prepare explanatory labels for the inaugural exhibition of the 1000 objects donated by Dr. Sackler to the Smithsonian, as well as for the preparation of the collection catalogue (The Arts of Asia in the Arthur M. Sackler Gallery). A full catalogue of the Near Eastern and Indian works in the Vever Collection, recently purchased by the Gallery, is also underway, with an anticipated publication date (coinciding with an exhibition) in 1988. Additional future exhibitions at the Gallery will also be based on research already begun on the Turko-Mongol conqueror Timur, Mughal gardens, and the Chinese painter Chang Ta-ch'ien, among other topics.

Additionally, it is anticipated that the Asian art history journal *Artibus Asiae*, now totally funded by the Sackler Foundation, will be produced by the Gallery (although its contents will be independent of the Sackler Gallery programs and collections). It is also planned, however, to publish a journal of scholarly research devoted to Sackler Gallery exhibitions and collections. These two journals would make the Gallery a major center for research publications on Asian art history. The Gallery's publications program will also include a quarterly bulletin intended for the general public. The bulletin will have color plates and informative text relating to the permanent collection, recent acquisitions and special exhibitions. Free leaflets will be provided in the exhibition galleries.

At the National Museum of American Art, the recently-donated Sara Roby Foundation Collection of more than three hundred and seventy art works from the last half-century will be published in a scholarly volume, to appear in January 1987; selections from the collection will be exhibited from January-July of that year. Other collections with publications are traveling throughout the country in order to make known the Museum's collections: "Art and Design, The Container Corporation of America's Collection;" "Sharing Traditions;" "Five Black Artists in Nineteenth-Century America;" and "Treasures from the National Museum of American Art" which will return to Washington in May 1987. Each of these projects involves significant curatorial research which is included in the accompanying publication as documentation and interpretation; in addition to resident staff, guest specialists have contributed to the publications.

In a major new initiative, the Museum is beginning a journal to be called *Smithsonian Studies in American Art*. Oxford University Press has undertaken to publish and distribute the journal; the first issue will appear in spring 1987. The journal is served by an advisory board of external scholars who will also serve as reviewers. Articles on American art and culture are invited from scholars across the nation and beyond; contributions by Smithsonian scholars and articles about the national collections are encouraged. The early issues will include articles by staff curators on the Thomas Hart Benton mural *Achelous and Hercules* and the Thomas Hotchkiss painting *Torre di Schiavi*, both in the NMAA collections.

Other collections-related projects in the Museum include a study of Paulanship, to result in a monograph and *SITES* exhibition of that artist; a project on Albert Pinkham Ryder, which involves a technical study in collaboration with the Conservation Analytical Laboratory. Examples of more traditional art historical research includes preparations for a Joseph Cornell catalogue raisonné; a traveling exhibition and related didactic materials on Post Office mural paintings from 1935-43, and American miniature painting. During the past year the Museum printed a revised edition of its catalogue on Romaine Brooks, focussing on the extensive collection of her works at the NMAA.

Among the current research programs at the National Portrait Gallery are a study of American portrait painting from 1700 to 1776; a study of the history of radio and television broadcasting and portraits of the major figures in this area; research into portraits of significant American jurists from Colonial times to the present; and a study of portraits and biographies of the members of the first United States Congress. The Gallery is also identifying and studying the portraits of American painter Henry Inman; the American sitters of the Swedish painter Anders Zorn, the relationship of the portraits of Andrew Jackson to his evolving national image, and the history of Time, Inc. is patronage of portrait artists. All of these are directed towards major exhibitions scheduled for the NPG in the coming two or three years; each exhibition will be accompanied by a major publication. The research projects listed above are involved with objects from the NPG collections, in some cases combined with loans from other public and private collections. Research primarily focussed on publication is going forward on the life of the photographer Mathew Brady; the career of painter James Earl; the life and work of Charles Fevret de Saint-Memin; and the papers of Charles Willson Peale and his family. Volume 1 of the Peale Papers has already been published by the Yale University Press; volume 2 (in two parts) is in the press, and volume 3 of this 8-volume set is in the final editing stages. The book on St. Memin is being edited for publication by the SI Press, with a grant from the Barra Foundation.

Since 1974, the Hirshhorn Museum and Sculpture Garden through its Department of Painting and Sculpture has developed a program of intensive research on its collection of modern and contemporary art. The primary documentation on the collection, together with interpretive research, is maintained in the Collection Archive, which serves as the central information file on the permanent collection. Among the major research projects undertaken within the past ten years is an international

biographical survey of living artists represented in the permanent collection. The curators in the Department of Painting and Sculpture have also devoted intensive research to the history of casting of modern sculpture, with particular emphasis on the problems of connoisseurship, foundry marks, and editions. With the receipt of Joseph H. Hirshhorn's bequest early in 1986, the curatorial staff has undertaken a massive effort to research and catalog the more than five thousand works bequeathed to the museum.

Periodically, collections-based research has focused on topics that result in exhibitions. An investigation of relief sculpture resulted in 1986 in an exhibition selected from the permanent collection. Plans are now underway for an iconographic research project on images of bridges in modern art, to go on view in 1987. Finally, one project which began as a study of the museum's holding by the Swiss sculptor Alberto Giacometti will culminate in a major retrospective loan exhibition in 1988.

At the National Museum of African Art, ongoing research on the extensive Lamb Textile Collection of fifteen hundred examples (jointly acquired with the National Museum of Natural History) as well as textiles in the NMAfA permanent collection was furthered during 1985-86 by a Regents Fellow, Curator Emeritus of the Basel Museum, Dr. Renee Boser-Sarivaxevanis. Preparation for an exhibition and catalogue of selected textiles from these holdings is now nearing completion for the opening of the Museum on the Mall. Also for the Museum's re-opening in 1987, there are in preparation two other exhibitions based on NMAfA collections both of which will involve research by curatorial staff. One is devoted to Benin Bronzes which will include the works recently transferred from the Hirshhorn Museum and Sculpture Garden and will be accompanied by a catalogue discussing the history, use and iconography of these works of art. The second research exhibition is a large number of recent acquisitions from the Museum's permanent collection of sculpture.

Many NMAfA exhibitions and attendant publications include both loan materials as well as works from the collection. Curatorial research is directly related to such exhibitions and publications. Examples include a recent exhibition of Bamana figurative sculpture as well as projected exhibitions in post-1987 of Bamana masks and marionettes, African pottery and African master carvers.

The Museum's Photographic Archives, which includes over seventy thousand black and white photographs and nearly one hundred and fifty thousand color slides, is the center for ongoing research into the context of African arts. Many of the images are of historic importance; others capture the arts in their traditional settings. These images, important to researchers dealing with meaning and context studies, are also examined for the mounting of photographic exhibitions and catalogue publications, such as the photographs of southern Africa by Constance Stuart Larrabee.

The National Air and Space Museum learns a great deal about an airplane and its operational history during restoration. An example is the recently restored World War I SPAD XIII. The wings and fuselage of the aircraft were riddled with bullet holes, all supposedly sustained during combat. However, the restorers discovered that the bullet holes in

the wings could not have been made by enemy fire. These bullet holes were actually placed in the wings by Americans in Europe who were preparing the airplane to be sent to the U.S. Further research led to the discovery that the wings now on the airplane had been attached only for two missions and had not been on the aircraft during combat. The original wings had been scrapped because they had received so many bullet holes. This and other information learned during restoration will be included in a book on the SPAD XIII.

The Museum recently received a large collection of material on aerial photography that had been in the possession of the famous photographer Edward Steichen. Museum researchers discovered that Steichen himself had more involvement with aerial reconnaissance operations in World War I than has been recorded in previous Steichen biographies. This information led to further research into Steichen's position as Chief, Photographic Section, U.S. Air Service, American Expeditionary Force, which will culminate in a book to be published by the Smithsonian Institution Press.

At the Museum's Center for Earth and Planetary Studies, the collection of more than four hundred thousand planetary images is the core material for research on planetary surfaces. Using manned and unmanned spacecraft photographs, geologists at the Center are studying the origin of surface features, and mapping the distribution of certain types of land forms on the planets and their moons. The collection of Space Shuttle photographs is likewise used for analyses of Earth's surface features, particularly in arid lands.

At the Cooper-Hewitt with more than one hundred sixty-seven thousand items in its permanent collections and just three full curators and one assistant curator to care for them, research on the permanent collections is often generated -- and limited -- by the Museum's outstanding and varied schedule of special, thematic exhibitions. It is usually an exhibition which provides the Museum's opportunity to exhibit an object or group of objects and to publish information developed by curatorial research. Among the special exhibitions now planned for the immediate future which will reflect the results of such research are ones devoted to fans, locks and keys, and printed fabrics. Longer range planning involves collection materials relevant to designs and objects generated by the universal human experience of death, marine life forms in the history of art and design, and domestic cutlery and tablewares.

Additionally, research continues as time permits on the structures, patterns, uses and manufacture of lace, on draw-loom woven fabrics from the fourth to the twentieth century, and repeat as a design determinant and technical aspect of patterned textile manufacture. During FY 1986, the Curator of Textiles offered a special course in textile structures analysis for an invited group of professional colleagues from across the country. Cooper-Hewitt collection materials provided the working materials for the course, which we expect will be re-offered bi-annually as a service to the field. In the Drawings and Prints Department, new collections-based research included investigations of our Antonio Gentile (1531-1609) drawing of a silver crucifix for the high altar of St. Peter's Basilica in Rome, a study of one hundred and ten drawings by Carlo Marchionni (1702-1786), and analysis of a group of one hundred and twenty

five European and American interior design drawings of the sixteenth to twentieth century.

Collection-based research also results from the interests and activities of both faculty and students in the Museum's graduate program in the history of decorative arts. Also conservators are active researchers at the Cooper-Hewitt. In FY 1986, for instance, work continued on the analysis of material components and functions of metallic fibres in textiles between the fifteenth and nineteenth centuries and the history and conservation problems of transparent papers before 1850.

The more than eighty million specimens of animals, plants, fossils, rocks and minerals, and artifacts of human culture housed by the Museum of Natural History/Museum of Man provide a focal point for the basic research of a resident staff of more than two hundred scientists from the Smithsonian and other affiliated government agencies. Numerous scientists all over the world also use these collections, either as visitors or borrowers. Almost four hundred thousand specimens and objects were loaned in FY 1986.

Ongoing collection-based research studies include:

A Smithsonian-National Geographic Society search for the geological remains of the ancient Strait of Gibraltar, a passage believed to have been destroyed more than five million years ago by the collision of the European and African continental plates. The project is providing historical evidence for the formation of the mountain systems of southern Spain and northwest Africa, and has yielded a vast collection of microfossils valuable for scientific studies and mineral, petroleum, and water exploration.

Concern over the high prevalence of cancer in fish living in chemically contaminated bodies of water, and the potential human health hazard this poses, has recently focused attention on the Museum's Registry of Tumors in Lower Animals. The Registry, a depository for a collection of more than five thousand diseased specimens of fish, shellfish and other animals from the U.S. and forty other countries, is the only clearing house in the world for information on the phenomena of cancer in fish and other vertebrate and invertebrate cold blooded animals.

Information on pathological conditions of special significance in the Museum's incomparable collection of carefully catalogued skulls and bones, was recently computerized under a National Institutes of Health-funded study focusing on the origin of disease. It is expected to provide some answers to questions concerning human adaption and how different disease conditions reflect both biological and cultural components of the past. The skeletal collections, containing more than thirty-five thousand specimens, represents nearly every geographic area of the world, some dating back five thousand years to the early development of cities. It includes the Terry collection of modern skeletons that has been invaluable in the creation of a system that has successfully assisted in identifying children missing for a number of years.

Collections of wild Loggerhead sea turtles stranded on U.S. Atlantic coastal beaches are yielding demographic data to a Museum research team that are increasing our understanding of the biology, behavior, and ecology of dwindling Atlantic sea turtle populations, and hence their conservation and management.

Museum volcanologists continue to collect the ongoing eruptive products of the Mount St. Helens Volcano, which exploded catastrophically in May of 1980. Studying the changing chemistry and gas content of successive lavas helps scientists understand what is driving the volcano's continuing activity. Eventually it may be possible to predict phases of eruptions of Mount St. Helens and other volcanoes in the Cascade Mountains and elsewhere in the world.

Unknown sea life discovered by divers in previously unexplored underwater marine caves in the Bahamas, Bermuda and the Turks and Caicos Islands is being intensively studied by Museum scientists. The diversity of these valuable collections includes, for the crustaceans alone, a new class, a new order, two new families, three new genera, and twenty new species. For scientists these animals and their environment provide a window on the past. Shut off for millions of years from the pressures of natural selections, in a stable environment similar to the deepest parts of the world's oceans, they reproduce more slowly than other shallow marine animals, live much longer lives, and have lower metabolic rates. Research by Museum scientists and colleagues at several universities has made possible classification of these animals and led to new hypotheses on the distribution of animals via the action of plate tectonics and the use of cryptic habitats on the sea floor.

The Museum is one of six sponsoring organizations of a long-term multinational effort to describe the little known plant life of Guyana, Suriname, and French Guiana, an area of tropical America that has received little botanical attention in the past. Most of the Guianas is covered by tropical forests, and a knowledge of indigenous plant resources is economically important to the development plans of the three countries involved, and crucial to the assurance of the orderly, non-destructive use of a vast natural resource. This long term project, involving more than a dozen Museum botanists, is being significantly aided by existing Museum collections, which are serving as references to past exploration.

A vast compilation of taxonomic and biological data on wasps, bees, and related insects in America north of Mexico has been entered into an electronic database by Museum entomologists, accomplishing a revolutionary advance in the field of systematic cataloguing. The data bank for some eighteen hundred species of Hymenoptera contains a wealth of biological information that makes the database valuable to a wide variety of scientists: for example, parasite-host records for those interested in biological control and bee-plant associations of value to pollination ecologists and botanists. Data on Mexican wasps and bees will be added to the data bank in the future to enhance its usefulness.

At the National Museum of American History catalogue projects are underway on the Museum's African-American holdings, labor history collections, and, jointly with the National Museum of Natural History, on the

ethnographic and ceremonial Judaica collections. Labor history collections also are the focus of an analysis of labor iconography.

The Museum's domestic and community life collections are being used in a study of the visual culture of "civilized morality" in 19th century America. Furniture and trade catalogue collections were used in a study of the social and cultural meaning of appearance in 19th century furniture. Photographic collections are being studied for a history of the photographic darkroom.

Continuing long-term projects utilize the Museum's collections of political iconography to pursue a comparative study of the meaning of the suffragist movement and of the women's movement of the 1970s; the costume collections continue to be used to define and compare gender role ideals in American history.

The artifact collections of the Department of the History of Science and Technology continue to support a wide variety of research projects. A sampling of recent collections-related research includes the use of technology collections to document patterns of economic, social, and technical change. A forthcoming article on the pin-making machine, for example, interprets the artifact as a prototype of mass production machinery, and a study of the Blanchard lathe, one of the first self-acting machines, traces the early steps of factory automation. A survey of 19th century cotton gins in our collections and elsewhere uses them as a basis for reinterpretation of Southern mechanical skills and inventiveness. A growing collection of documentary photographs will be featured in an exhibition and catalog dealing with the cultures of rural people.

In the area of historical archaeology, the Division of Transportation has undertaken a basic survey of the U.S.S. Indiana artifacts, including the earliest propeller driven ship's machinery ever recovered. Ongoing studies of the John Bull Locomotive view the artifact in the context of technology transfer and adaptation. And studies of our railroad photographic archives will examine the popular image of the railroad in American culture.

The Department's extensive collection of scientific instruments provide evidence for numerous studies. For example, ongoing research on Philadelphia-made instruments sheds light on the community of instrument makers, their social status and their relations with the growing scientific community.

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